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ARTICLE I.—*De l'Emploi de l'Opium dans les Phlegmasies des membranes muqueuses, séreuses et fibreuses. Par* J. L. BRACHET, *médecin de l'Hotel-Dieu, &c. de Lyon; membre de la société royale de médecine, &c. &c. Ouvrage couronné en* 1825, *par la société médico-pratique de Paris. Suivi d'un memoire sur les fièvres intermittentes. Paris*, 1828. *Pp.* 404.

Observations on the Use of Opium in Inflammations of the Mucous, Serous and Fibrous Membranes. By J. L. BRACHET, M.D. *&c.*

So far as we know, there are but few medical or other societies in this country, that offer prizes for dissertations on given subjects. In Europe things are very different; the advantages of such competitions are there duly appreciated. The number of the *concours* opened annually, the alacrity with which the questions proposed are answered, and the great merit of some of the successful essays, sufficiently evince the importance attached to them, and the benefit they confer on science. In France most of the academies and societies in the capital as well as in the provinces, from the different branches of the National, now Royal Institute, down to the smallest medical, scientific or literary association, annually hold

out encouragement of the sort, and not a few of the most distinguished productions in the various departments of knowledge may be found to have originally owed their existence to the stimulus occasioned by the hope of success in obtaining the offered premium—which premium is always more valued for the distinction it conveys than for its intrinsic worth.

Like most, if not all the other medical associations of Paris, the medico-practical society annually proposes questions and awards prizes of more or less value. As may be seen from the title preceding this article, the work before us was some years ago presented to and crowned by that society. This circumstance, as well as a previous knowledge of the rare abilities of the author had led us to anticipate much satisfaction and instruction from a perusal of it; and we do not hesitate to say that our expectations in these respects have been fully realized.

The question proposed by the medico-practical society is stated by Dr BRACHET to have been—

"To determine by exact observations, if, among the inflammations of the mucous, serous and fibrous membranes, there exist cases in which opium or its preparations should be administered as curative means; and in what doses. To point out such cases, as well as those in which it is necessary to abstain from all preparations of opium."

As our readers will perceive, the question here proposed for solution is one of deep importance. It involves a therapeutical,—we may even say a physiological and pathological, point of the utmost moment to decide, as in the solution of the long debated question of the modus operandi of opium in disease, will depend the rules for its administration,—the addition or rejection of fresh means for the treatment of some sorts of inflammations, and our views of the nature of certain cases in which it is administered with advantage, or in which we should abstain from its use entirely.

Agreeably to the fashion of the day M. BRACHET has prefixed to the main body of his work an *introduction*, in which he explains his views of the causes of diseases; laments the little attention paid lately to therapeutics and the mode of action of remedies, &c. On all these subjects his remarks are, sometimes ingenious, often judicious, and certainly deserve to be briefly noticed in this place.

"It is possible," he remarks, "without losing sight of the suffering organs and of pathological anatomy, to occupy ourselves advantageously with the medication of each organ and with the

modification necessitated by each mode of alteration of which it is susceptible. This is a branch of medicine which has been much neglected until now, (presque vierge aujourd' hui). The greater number of ancient theories on the action of remedies are false or erroneous; they are founded, in great measure, on abstract ideas with which medicine cannot at this day content itself. At present explanations founded on physiological truths are required. It is undoubtedly in this intention, that the society has proposed as a question the effects of one of the most heroic remedies, which, agreeably to the expression of SYDENHAM, constitutes one of the noblest presents of the divinity, since it charms the last moments of our existence and soothes the sad image of destruction."

We perfectly agree with our author, that within a few years too exclusive an attention has been paid to morbid anatomy, and too little to therapeutic. But at the same time we think, that this defect is chargeable on our French medical brethren much more than on physicians of other countries. They it is who prosecute with greatest zeal the study of morbid anatomy. In their works we find those minute details of post mortem appearances and that glaring neglect of practical deductions and rules, which Dr B. attributes to physicians generally. But in doing this, he has only imitated the majority of his countrymen, who, in speaking of the state of science, only allude to what occurs in France, and never to what is doing in other countries, whose medical literature is quite unknown to them. These physicians seem to think that France is the whole world, or at least, that the medical men of their country are alone to be looked to as the regulators of the science. Be this as it may, we cannot help assenting to the following remarks:

"Instead of allowing one branch of the healing art to wait for the tardy progress of another branch, it is essential that it should march as its equal, and that it should contribute with it to the advancement of science; for there is no doubt that therapeutics can contribute to reveal the secrets of nature and indicate the true character of a disease, according to the effects which, under given circumstances, remedies produce on the human body. Let us reject with horror that barbarous and scandalous paradox that autopsy alone completes an observation. May we rather remain ignorant of the nature of the disease if we can only purchase it by the death of an unfortunate fellow being! How much more consoling would it not be to inscribe on our tablets only those patients whom we have saved from death! If to cure be to perpetuate ignorance, may we remain in an eternal state of ignorance!"

In his "Considérations general sur les causes des maladies," the

author offers some very pertinent remarks on the functions of the nervous and vascular systems, and on the part they play in the production and phenomena of inflammation. "Functions," he says "are performed solely by these systems." For example, "fluids arrive (in a secretory organ) in vessels, and carry with them the materials of secretion; the impression is received by the nerves; other vessels thus informed (avertis) select and elaborate the materials, and transmit them exteriorly endowed with different qualities; whilst another order of vessels convey the superfluous liquid into the common grand reservoir. What takes place in a gland, is found to occur in all the other functions. We every where perceive the concurrent action of nerves and of vessels, although we find them sometimes united with the action of the muscular system, as in the heart, stomach or locomotive apparatus, or although one system of nerves may be alone charged with the function, as in the sensorial and intellectual ones. The vascular and nervous systems, I repeat, are found in every part of the body; and without them no function is performed."

As regards the nervous system, to which he directed his attention more particularly, our author presents a very brief detail of their different functions. To the cerebral system of nerves he properly assigns all perceived sensations and all the acts of intellect and volition; in a word, all that concerns animal life—life of relation, or, as he denominates it, cerebral life. To the ganglionic system belong all operations relative to what has been denominated organic or nutritive, but which he designates ganglionic life: as, for example, secretions, exhalations, absorption, nutrition, formation of new tissues and capillary circulation. After stating that the combination of the two lives in animals has required, for the performance of certain functions, as respiration, digestion, &c., the association of the combined acts of the two nervous systems, he remarks:

"The line of demarcation being thus drawn between the two nervous systems, it becomes easy to appreciate the part which they each perform in the diseases of every organ and of every tissue. Either one or the other may be affected in an isolated manner, and independently of the other; although in the greater number of cases they are affected simultaneously. Every time an organ or tissue is diseased, whatever may be its mode of alteration, one of the nervous systems is at least affected. I go further and affirm, that no tissue, no organ, can be affected without one of the two nervous systems having been so primarily. The morbific cause acts first on one or both of them,

and it is on their reaction that all the pathological phenomena that supervene, whether locally in the diseased organ, or at a distance, by means of sympathies, depend."

With a view of illustrating more fully his views relative to the part which each of the nervous systems plays in the production and development of disease, he supposes a thorn to have been pushed into the tissues. It meets there, the two orders of nerves, and produces on one a sensation which is felt by the brain, and which being no longer natural, becomes painful. On the other it produces an impression which increases morbidly its reaction, and from which results an increase of capillary circulation, a greater afflux of liquids in the part, an increase of volume, viciation of secretions and exhalations, formation of new products, transformation of tissues. If the thorn avoids all the branches of the cerebral nerves, and acts only on the ganglionic, the first pain will not be felt, but all the other phenomena we have enumerated will occur. If, on the contrary, the thorn, in penetrating, meets with and irritates a cerebral nerve, and separates, without injuring, the ganglionic filaments, there will be pain, without inflammatory accidents. If, finally, the thorn penetrates in such a way as to separate the fibres, without offending any of the nervous filaments of one or other system, there will be neither pain nor inflammation, as occurs sometimes in acupuncturation. Every other cause of disease, agreeably to the author, operates in the same way as the thorn, so that he properly concludes that at the onset of every inflammation there is, 1. Local nervous irritation. 2. Afflux of liquid.

"According to the importance of the organ or of the part irritated, as well as to the extent of the irritation, the phenomena will occur exclusively in the part, or at least remain a long time local; or else they immediately become general; that is, the organ in which the irritation is seated, reacts on all the animal economy, and produces the febrile inflammatory movement which depends principally on the reaction of the whole circulatory system. I will here remark, that pain, more or less acute, exercises little or no influence in the development of these general phenomena. The circulatory tree is under the immediate dependence of the ganglionic system, and receives only a sympathetic and secondary influence from the cerebral nerves. A very painful wound will sometimes occasion no sensible change in the circulation, whilst an imminent angina, which has not even yet caused any pain in the throat, gives rise to a violent inflammatory fever."

"This distinction puts an end to the controversy respecting the

identity or non-identity of irritation and pain. It is besides very important for the subject more particularly before us, and we shall be obliged to recur to it often, because it will lead us to a just appreciation of the cases in which opium will be either a heroic remedy or a fatal poison. Let us not forget that pain is not a sign of inflammation, that it can even exist without it, and that from this there result several modes of commencement of inflammation which we will class as follows: 1. Inflammation with acute pain and without fever; 2. Inflammation without pain, or with little pain and without fever; 3. Inflammation with acute pain and violent fever; 4. Inflammation with little or no pain and intense fever."

This classification our author regards as useful, because it leads to another important result,—that all inflammations which are not accompanied from the onset by fever, do not present much tumefaction in the part, because the local capillary system has not become pathologically developed, and the reverse. As regards the fever which accompanies inflammations, Dr B. says it is of two sorts. Sometimes it is only the effect of pain and of sympathetic reaction; in such cases we have a true nervous fever, as is noticed every time a slight inflammation causes much pain and occasions active contractions in the heart. At other times the inflammation, being very intense, and the disease in some sort general, fever occurs, because the whole circulatory system is inflamed, the blood is more dense, more plastic and forms the pleuritic buff. In such instances we have before us a true inflammatory fever, or, agreeably to the expressions of M. Broussais, an *inflammatory diathesis*. "I have thought it necessary to point out this modification in the fever which accompanies inflammations, because it is of the utmost importance for the subject that occupies us. We are all aware, and therefore I need not repeat it here, what an immense difference these two febrile modes occasion in the treatment."

As may well be imagined, Dr B. is of opinion, that inflammation, giving rise as it does to very various phenomena, according as one or other of the systems of nerves is affected, it cannot be uniform in its nature and require but one method of treatment. On this subject he remarks—

"Certainly the one who would treat an inflammation accompanied with very acute pain, but without tension, redness, or capillary swelling in the part and without febrile reaction, in the same manner as he would an inflammation with tension, heat, considerable injection, intense fever, though with a moderate degree of pain, would commit a great error, and could not give a favourable idea of

his practical experience. This truth is well known to every practitioner and leads to this conclusion, that in the treatment of each of the four modes under which we have seen that inflammation primarily presents itself, the physician must endeavour to act more particularly on one or the other nervous system, according as the irritation preponderates in it, and search for the means by which he will be able to attain this object."

We have thus given, undisturbed by our own remarks, Dr BRACHET's views relative to the influence of the two systems of nerves in the production of disease, and to the modification brought on in inflammation as the one or other of these systems is principally affected; because we think them plausible. The last quotation we have presented from his work appears to us particularly valuable. We cannot help thinking, however, that our author has spoken of fever in terms much too vague. What, for example, can we understand by fever of an inflammatory character arising from an inflammation of the whole circulatory system? Did Dr B. or any one else ever see such a thing as the universal diffusion of inflammation throughout the whole of that system? We think it may safely be affirmed that such a pathological state has never existed. But we have too favourable an idea of Dr B.'s good sense and correctness of observation to suppose for a moment he could have intended to convey the idea that inflammatory fever really depends on the existence of this cause. We prefer thinking, that his only error, in this case, has been in making use of language much too vague to convey properly his meaning. He inclines, it would seem, to the opinion of FRANK and others who attribute inflammatory fever, whether symptomatic or idiopathic, to an inflammation of the lining coats of many of the larger arteries.

For our own part, if we may be allowed to hazard an opinion here, we cannot understand fever to depend on any other cause than on irritation, primary or secondary, of the mucous lining of the heart or larger vessels, with a concomitant excitement of the capillary system. In the latter case, when the irritaton in question is secondary, the heart, &c. will be affected only sympathetically from a local irritation seated at a greater or less distance. In the first case, on the contrary, the primary irritation will be situated in the heart and large vessels themselves, and all affections occurring in other parts of the body will arise from a sympathetic connection of these parts with the heart and large vessels, or will be the effect

of accidental coincidences. We are ready to do justice to the ingenuity of some of Dr B.'s explanations, and to admit, that he has rendered it very probable, that the difference observed in the character of the fever depends on the difference of the nerves principally affected; and it appears to us, that nothing of what he has said relative to the cause of difference in the phenomena occurring at the onset of the different modes of inflammation, is contradicted by the views we entertain of the proximate cause of fever, since the character of the irritation of the heart, and consequently of the fever resulting from it, will always depend on the character of the primary irritation, and on the particular system of nerves affected.

In his chapter on the mode of action of opium Dr B. does not appear to be as perspicuous *profound*, and we will even say exact, as we had hoped he would be. He has shown, it is true, that opium acts on the two systems of nerves, and has offered a much more plausible explanation of the manner in which this substance gives rise to the fulness of the pulse, than the one originally proposed by WIRTENSOHN and subsequently adopted by BARBIER. But he has erred, we think, in denying the excitant effect of opium under particular circumstances. BROWN has said, *opium me hercle non sedat;* and this is certainly correct in some instances, notwithstanding all M. BRACHET can say, though we are not prepared to admit that it will be found invariably so. The Mahometans, if ever M. BRACHET's book get among them, will be greatly astonished to find that all their feelings of the exciting effects of opium are fallacious, and that this substance acts simply by stupefying them. They will probably exclaim, that it is a queer stupefaction that can render them more ready to fight, love, sing, dance, &c. in fact, that can so simulate in them the effects wine produces in others. Dr MADDEN is not likely to assent to Dr BRACHET's views; for during his visit to Turkey he had sufficient opportunities of perceiving the exciting effects of opium, and even of experiencing them in his own person. The subsequent debility resulting from the use of opium is no argument against the opinion of its exciting effects, as a similar debility results from the use of articles of acknowledged stimulant power. At any rate we offer here his views on the subject, and allow our readers to judge for themselves of the merit to be attached to them.

"Opium acts on the cerebral nervous system: it does not paralyse, but diminishes its action; the impressions are felt more feebly, and reaction is almost null;—the senses are nearly extinguish-

ed, and the movements are benumbed. The action of opium on the ganglionic system of nerves is analogous to that which it exercises on the other system;—it diminishes its special sensibility, and benumbs its reaction. Now, the whole circulatory apparatus, heart, large and small vessels, is under the direct dependence of the ganglionic nervous system; consequently the circulation must experience a derangement corresponding to the condition of that system when under a narcotic influence. The impressions are more feeble, and reaction does not take place. The presence of the blood in the heart and large vessels is little felt, and the action of these organs is much less energetic. From this follows, therefore, a great diminution in the rapidity of the course of the blood. Now, natural philosophy teaches us, that a liquid which passes with double velocity, occupies half the space that the one circulating slowly does. The blood performing its course slowly in the arteries, during the narcotic effect, occupies a space double that it would occupy were it propelled with force and rapidity. Consequently it is an effect, in which the whole circulatory system, and not the capillaries alone, participates. The arteries, the capillaries and the veins are full, the heart itself seems ready to succumb from the quantity of blood with which it is gorged, not in consequence of the reflux, but from the simple reason, that each of those parts reacts feebly on the fluid, and can no longer communicate to it that velocity of circulation which is necessary for the free exercise of all the functions. It is to this fallacious appearance of irritation of the circulatory organs, that we must attribute the opinion of some physicians who consider opium as an excitant."

After these preliminary observations, M. Brachet enters on the main subject of his researches, and treats first of the use of opium in inflammation of the mucous membranes. In doing this, he commences with offering, in a few words, an account of the anatomical composition of the tissue in question, and points out the great analogy, already recognised by every good writer, between the mucous membrane and the skin. As may be expected he makes here an application of his views respecting the part played by the two systems of nerves, in the production and phenomena of inflammation. He shows that these two systems enter into the composition of the mucous tissue, though not in equal proportions every where, and that this difference accounts, in great measure, for the modifications presented in the phenomena of inflammation in each of the regions of this membrane, and particularly for the various degrees of pain experienced in the diseases of these parts. Thus the conjunctiva, the mucous lining of the nose, mouth, pharynx, larynx, receive a large supply of cerebral nerves, and possess in a high degree the

cerebral sensation. The stomach receives a great portion of the pneumogastric. In the small and in a part of the large intestines, a smaller proportion of cerebral nerves is distributed, and consequently these parts possess less of the cerebral sensation; the large intestine receives a greater number of cerebral nerves and acquires in consequence more cerebral sensibility. The same may be said of the mucous lining of the bladder and genital organs. Of the ganglionic nerves and the sensations peculiar to them, we may judge by the number of the organic functions with which these membranes are entrusted, and by the activity with which they perform them. In the mucous membranes we find, therefore, and in a high degree too, all the elements of inflammation. But whenever this occurs, the irritation invariably commences in the nervous tissue. If the ganglionic system be the only one affected, there will be little or no pain, unless the inflammatory congestion has taken place rapidly and to a large extent. If, on the contrary, the irritation attack more particularly the cerebral system of nerves, the pain will be more or less acute, agreeably to the violence of the irritation, while the inflammatory congestion or tumefaction will be nearly null, or at least not proportionate to the violence of the pain. In this case there will be also little or no increase of exhalation or mucous secretion. To this must be added, that in different regions of the mucous membranes the phenomena of irritation will vary in direct ratio to the quantity of cerebral or ganglionic nerves they receive. Our author makes here a remark which should always be borne in mind by the pathologist, as it serves to explain the variety observed in the phenomena of inflammation in the same portion of the mucous tissue, and tends to diminish the confusion in which the nature of some of the diseases of these parts has but too long been involved.

"The local phenomena of these inflammations will greatly vary, according as one of the tissues entering into the composition of the mucous membrane is more affected than another. Whenever the sanguineous capillary system is the seat of the primary irritation, the swelling of the membrane is considerable, and the secretions and exhalations are suppressed. When the exhaling system suffers primarily and in a greater degree than the other parts, there occurs an abundant exhalation, as for example in diarrhœa. When the mucous cryptæ are principally affected with the inflammation, an abundant mucous secretion takes place, and its products are either expectorated or voided by stool," &c.

The irritation being seldom confined to one of these constituent

tissues, but attacking at the same time several, we have an explanation of the great diversity observed in the phenomena of inflammation of the mucous membranes, and find no necessity of resorting to the idea of specificity to account for it. In all such cases, the irritation may be regarded as identically the same, the only difference in the phenomena depending on the difference of the parts affected. At the same time neither the author, nor ourselves deny the existence of specific irritations differing, in some respects, from other irritations situated in the same tissues, and giving rise of course to peculiar phenomena.

Dr Brachet first treats of the use of opium in ophthalmia, and presents the detail of many cases of this disease, in which the remedy was used with more or less advantage. He appears to be ignorant of the observations, on the same subject, of the late Mr Ware and others. From the facts which our author has had occasion to notice, he concludes—

1. "That opium will be very useful in cases of ophthalmia in which acute pain indicates a high state of irritation of the cerebral nerves, and that if it does not always cure, it has at least the advantage of diminishing irritation and calming pain. 2. That at the commencement of every inflammation, irritation being the predominant and often the only symptom, opium must be administered uncombined with any exciting substance; consequently, that its solution in simple water, or still better in a mucilaginous decoction, will answer particularly well. 3. That in irritations occasioned by a blow, the presence of a foreign body, a wound, &c. the aqueous solution of opium is more efficacious than ordinary means; and that it would perhaps be very useful, after the operation for cataract, or any other operation on the eye, to keep this organ wet with this solution, in order to prevent the supervening inflammation. 4. That in the course of a violent ophthalmia, preparations of opium are only admissible for calming the accompanying pain. 5. That when the inflammation has subsided, and leaves the eye in such a state of excitation that it cannot support the impression of light, opiate preparations will be found the most efficacious of all remedies. 6. That in chronic and indolent ophthalmia, opium does not appear to exert a marked influence, and even appears hurtful, as M. Demours has noticed, unless united to some slight excitant, as for example in laudanum, and as is done in a variety of collyria. 7. That in spots on the eye, albugo, &c. it is only useful when combined with slightly exciting substances. 8. That according to circumstances this substance must be combined with other appropriate means, and most usually with antiphlogistics, revulsives applied to the skin and

digestive organs. 9. That the dose of the remedy cannot be determined; and must be left to the physician who will be best able to judge also of the particular preparation to be employed. 10. That the slight sensation of burning it produces, must not deter us from resorting to it; and can only indicate the propriety of mixing it in a larger quantity of liquid. 11. Finally, that opium must not be regarded as a panacea, since it fails often; but that it does not the less appear certain, that it is, in many cases, a very useful remedy."

Dr Brachet has used opium with success in coryza, otitis, as well as in aphthæ of the mouth, and in inflammation of the gums whether produced by mercury, scurvy, or the irritation from carious teeth. In most of these cases, particularly in the first, he employs it not on, but in the neighbourhood of the inflamed membrane, whilst in the other diseases he uses it locally and sometimes by the stomach. In some cases of angina, when the pain is acute, he advises it to be mixed with the gargles employed; but thinks it especially proper when the inflammation has subsided and leaves behind a great nervous excitation of the parts attended with pain and spasms of the surrounding muscles. At the commencement of laryngeal irritations he has used it very advantageously both internally and externally, under the impression, that at this period of the disease the irritation is principally seated in the cerebral nerves, and calls for sedative more than for antiphlogistic means.

We shall not follow closely Dr Brachet in his remarks on the employment of opium in pulmonary catarrh, as he does not seem to us to have offered on the subject any thing new. All we shall say on that head, is that he properly recommends opium at the commencement of an attack, when the disease depends on simple irritation—that when inflammation, properly so called, has supervened, he insists on the necessity of being very cautious in the use of this article—that he thinks it very useful in cases of pulmonary catarrh complicated with spasms of the lungs—that in chronic catarrh he thinks it proper to use opium very cautiously, as in large doses it would be apt to suppress expectoration, and give rise, in consequence of paralysing the brachial ramification, to a sort of œdema from the accumulation of the matter, or to an engorgement—hepatisation of the lungs.—That when, after the symptoms of inflammation have subsided, the cough continues, he thinks that opium will be found indispensably necessary, and preferable, as more certain in its effects, to hydrocyanic acid, belladonna, &c.; finally, that he uses it advantageously during the course of the disease when the

irritation and cough prevent sleep, and the patient is troubled with a little nervous fever.

"In all cases," he adds, "as well as in the diseases already specified, the narcotic produces its effects on the cerebral nervous system, since it is only useful when there is irritation and cough. I have administered it internally and externally. I have too many reasons to be pleased with slightly narcotic cataplasms, not to use them frequently and recommend them warmly."

On the subject of croup Dr BRACHET presents us with several interesting pathological remarks. He properly considers this disease as always the same; that is, always inflammatory. In the worst cases the irritation is, from the onset, very violent; in other instances, on the contrary, it remains for a longer or shorter space of time purely nervous. Finally, he is of opinion, that in croup the exhalants are principally affected, since the pseudo-membrane, which occurs in that disease, bears the greatest analogy with the false membranes of the serous tissues; and is essentially fibrous; and we all know that fibrine is the product of the inflammation of the exhalants and not of the mucous follicles. Dr B. asks whether opium would not be admissible to remove the super excitation, pains, spasms, and increased exhalation, occurring in this disease. He has not himself used it from the fear of losing time, and of acting too powerfully on the brain, which organ the age of those affected with croup, the difficulty of respiration, and the inflammatory condition of the system, would seem to predispose to engorgement.

We pass by unnoticed Dr B.'s remarks on hooping cough, in which he does not think very highly of opium, and on the real seat of which he does not appear ready to decide; and on other diseases in which the mucous membrane appears only secondarily, if at all, affected; and proceed to lay before our readers some of this author's views respecting the administration of the remedy in affection of the gastro-enteritic mucous surface. The first of these diseases M. B. mentions as benefited, under certain circumstances, by opium is gastritis. He is not of opinion, however, that this remedy will be advisable in cases in which the inflammation has fairly set in; but only when the symptoms indicate the presence of mere irritation of the cerebral nerves. He cites several interesting cases of the sort, as well as one in which this irritation remained after the subsidence of inflammation. Opium in all these instances proved very beneficial. In pyrosis, which he properly regards as the symptoms of a gas-

tric irritation, Dr B. thinks the use of opium highly advantageous. Like every other practitioner he regards the remedy as of the greatest benefit in all diseases of the stomach, depending on what authors have regarded as the effects of *vital lesions*, and which are merely nervous affections—as spasmodic vomiting, pains, cramps, &c. There is not the least doubt, that Dr BRACHET has taken a just view of the subject in separating nervous from inflammatory diseases of the stomach, and that much harm is occasionally done by confounding them and treating them by means of the same remedies. As much injury results to the patient from treating a gastritis by means of opium and antispasmodics, or from treating a gastralgia by means of antiphlogistics. But it appears to us, that our author has committed a pathological error in separating the nervous affections above named from cases of simple irritations of the stomach, the details of which he has given in full. These cases certainly differ in nothing from other cases of cramps and pains of the stomach, and, as he himself acknowledges, they do not depend on inflammation, they ought not to have been designated by him by the name of gastritis. This is an error, however, of small importance, as the treatment he recommends in all these instances is the same. We therefore do not deem it necessary to dwell upon it any longer, and content ourselves with presenting here the practical conclusions our author draws from the cases of gastric affections detailed in his work. 1. Opium is advantageous in all simple irritations of the mucous membrane of the stomach. 2. It can prevent the development of gastritis, when administered during the period of irritation, and before the appearance of inflammatory fever. 3. During the course of acute gastritis physicians cannot be too cautious as regards its use, and pay too much attention to the state of the brain and of the circulation. 4. In chronic gastritis it may be more safely used even in large doses; but even in these cases its chances of success are so uncertain, that it requires considerable skill for employing it with safety. 5. When, after an attack of gastritis, there remains nervous excitement, wakefulness, gastric pain and a nervous fever, this remedy is highly valuable.

In certain forms of diarrhœa, (which depends when simple on irritation of the exhalants)—in all stages of dysentery, (arising from an irritation of the exhalants and mucous follicles, combined, in severe cases, with the same state of the red capillaries,) opium, according to M. BRACHET, may be used advantageously, unless inflammation

of the other tissues is superadded, or that of the mucous membrane of the intestines runs high. In such cases he properly recommends its use to be preceded or accompanied by antiphlogistic means.

Cholera morbus is regarded by our author as depending on an "inflammatory irritation of the exhalant and follicular systems of the intestines and of the secretors of the bile, carried to a great degree of intensity, and united with a violent irritation of the cerebral nerves of the intestines. From this results, on one hand, an abundant secretion and exhalation of bile and intestinal fluid: on the other acute pains and rapid intestinal contractions." "It is difficult to suppose," he adds, "that so violent an irritation should limit itself to the exhalant system—in most cases the red capillaries become implicated in the disease; when this occurs there is interitis, sympathetic fever, heat of skin." As may already have been foreseen, in the first or simple form of cholera, Dr B. trusts almost exclusively to opium; in the second or inflammatory form he combines with this remedy the free use of antiphlogistics. In this disease, as well as in gastralgia, dysentery, &c. Dr B. pushes the use of opium very far, whenever the nervous irritation runs high; as in such instances the power on the parts to receive impressions is very much impaired.

M. Brachet does not undertake to decide positively on the still agitated question of the nature of continued and remittent fevers, and particularly whether or not they invariably depend on gastro-intestinal inflammation. From some expressions, however, scattered throughout his work, and from a few words he hazards on the mucous fever of authors, we are disposed to think he inclines to the opinion of M. Broussais relatively to those diseases. In speaking of true enteritis, in which the irritation attacks the red capillaries, and not, as in simple diarrhœa and dysentery, the exhalants and mucous follicles, he details a case of inflammation of the intestinal mucous membrane, attended with much pain and griping at the umbilicus. In this instance, to the inflammation was added much irritation of the cerebral nerves. Opium in the commencement failed, but after copious depletion from the arm and by means of leeches applied to the abdomen, it succeeded admirably. From the results obtained in this case and in many others, the author concludes, as he has done before, that the inflammation in all such instances must be removed by antiphlogistics before any effect can be expected from opium in diminishing irritation of the

nerves, of the exhalants, or of the mucous follicles. We regret that the want of space prevents us from noticing here some valuable practical remarks which our author makes on the use of opium in indigestion, hypercatharsis, colica pictonum, nervous ileus which is often combined with inflammation, hemorrhages from the mucous membranes, intermittent fevers, which by the way he does not regard as the effect of gastro-enteritis, cystitis, &c. It will be sufficient to state, that in the treatment of all these complaints, Dr B. is governed by the same principles as in the treatment of those we have noticed more in detail. When the irritation is seated in the cerebral nerves or in the exhalants or mucous follicles he resorts to opium, but abstains from this remedy whenever this irritation is complicated with inflammation of the red capillaries, or whenever this morbid state exists alone.

In the second section of his work, M. BRACHET treats of inflammation of the serous system. These membranes, he remarks, are supplied with ganglionic and cerebral nerves, and are consequently subject to the same diseases as the mucous tissues and other parts in which the same peculiarity exists:—that is, they are subject to nervous and inflammatory irritations. The latter irritations also present at their onset a period at which the nerves are alone implicated. In some instances the ganglionic is the only one of the two systems of nerves affected; from which results an absence of pain; whilst in other cases the irritation passes rapidly to the cerebral system, and gives rise to acute pain.

"The intensity of serous inflammations depends in great measure on their extent. Sometimes the inflammation occupies only a circumscribed spot; in other cases a great extent or the whole of the membrane, or even several membranes at the same time, may be affected. In the first case fever is slight or does not occur at all: opium will be used in this with much greater advantage. In the second case, there will be inflammatory fever proportioned to the extent of the inflammation; hence narcotics are, except under very rare circumstances, inadmissible. So long as the inflammation continues in its first period, whether the irritation be ganglionic or cerebral, opium offers itself as an efficacious and almost infallible resource, because the injection of the red capillaries has not yet occurred in the membrane. In the second period, the inflammation is decided,—the irritation is no longer isolated. It has attracted the fluids, and the *fluxion* has taken place. In these cases, the diseased membrane is thickened, tumefied, red; its capillary vessels are injected; its surface has lost its smoothness; it is dry and red; and in

proportion as its terminations approach, changes relative to these occur. In this case, opium can no longer prove but of secondary advantage; it may even become hurtful, not only by augmenting the capillary turgescence; but by assuaging pain, and creating in this way, in the physician and patient, a degree of confidence which prevents them from perceiving the progress of the disease.

"Serous inflammations are sometimes acute; but often they continue an indefinite period, and pass into the chronic state. In the first case the moment at which it is proper to administer opium may be determined. In chronic inflammation opium is of secondary importance, and can only be advantageously used with a view of calming certain nervous phenomena, more or less linked to the inflammation, over which its influence, if it exerts any, is very limited."

These practical principles are applied by Dr B. in the treatment of arachnitis, pericarditis, pleuritis, and other serous inflammations. In all these he recognises the existence of a stage of simple nervous irritation, in which the injection of the capillaries has not yet taken place, and which may be benefited, and even cured, by opium. In all these cases, however, and particularly in the former (arachnitis), our author recommends great caution in the administration of the remedy, as mistakes relative to the pathological condition of the membrane may prove dangerous and even fatal. After the real inflammation has been subdued by antiphlogistics, Dr B. very properly remarks, that a nervous irritation often remains, which is curable by means of narcotics, and that, after copious bleeding, opium will greatly contribute to effect the cure by removing the irritation, and thus preventing the renewed afflux of blood. Our author has adopted in peritonitis puerperalis the calomel and opium practice, preceded and accompanied, however, by antiphlogistics, and speaks of it in terms of high praise. On the whole of this section we cannot make more than one or two remarks. Experience has shown us, that there are cases of what are now called arachnitis, which, whether or not they depend on affection of the arachnoid, are purely nervous, and require to be treated by opiates; but experience has no less shown that the signs by which this nervous state is usually recognised are not infallible, and that in doubtful cases it is always safer to precede the use of opiates by antiphlogistics. The same occurs in pleuritic and peritoneal complaints. Some of our readers may perhaps recollect, that in a paper published in the Transactions of the Associated Apothecaries and Surgeon Apothecaries of England and Wales (Vol. I.) and reviewed in the

seventh volume of the Medical Recorder of this city, Dr ARMSTRONG of London strongly recommends the use of opium in peritoneal inflammation after copious bleeding, with a view of preventing "a subsequent increase in the force or frequency of the heart's action, and a return of abdominal pain." This practice, it will be seen, coincides in some measure with Dr BRACHET's, though the principles on which it is founded differ somewhat from those of the French physician. While on this subject we may remark, that, if we recollect right, Dr ARMSTRONG in the paper alluded to quotes no one, and gives the practice as originating with himself. Now had this author referred to some even of the older writers, he would have found, that in respect to it he had been anticipated, we do not say as regards inflammation of the peritoneum, but certainly as regards that of other serous membranes. Thus SARCONE, in his History of the Diseases of Naples, remarks, that when, in pleurisis "one or two bleedings have been resorted to, opium is generally very efficacious in removing all disagreeable consequences, in dispensing the physician from drawing more blood, and in procuring in the vessels that state of calmness so much desired."

On the subject of the use of opium in inflammations of the fibrous system, we cannot offer here more than a very few words. This system, our author remarks, is supplied with cerebral and ganglionic nerves, and consequently is liable, though, from peculiarities of structure and functions, in a less degree, to the same modifications of inflammation and irritation as the other tissues. Among the diseases of which he speaks in this chapter we find rheumatism, which he regards as very seldom, if ever, affecting the muscular system—inflammations from physical causes—white swellings. Of gout, syphilis, scrofula, scurvy, he speaks, because in these complaints the fibrous tissues are secondarily, and sometimes severely affected. In all these cases he recommends opium whenever pain indicates that the cerebral nerves are affected, while other symptoms point out that inflammation has not yet commenced, or has subsided. In other instances antiphlogistics are recommended, together with other means found useful in these complaints.

In termination, Dr BRACHET remarks—

"The theory of this work is founded on the action of opium. 1. On the cerebral and ganglionic systems of nerves. 2. On the circulatory system. 3. On the brain in particular. This remedy is useful whenever an excitation or irritation of the cerebral nervous

system exists. If this irritation be intense and unconnected with an inflammatory state, it is necessary to administer the remedy soon, and in large doses. If the irritation be the precursory symptom of an inflammation, opium may, by calming it, prevent the development of the disease. When the inflammation is developed, and there exists acute pain, the remedy may be useful, provided an inflammatory diathesis or fever has not yet supervened. In the latter case the fever must first be combated. The irritation which continues after the subsidence of inflammation is happily removed by means of opium. The state of the brain demands always a most scrupulous attention, in order that narcotics may not occasion in that organ a fatal congestion."

ARTICLE II.—*A Treatise on Pathological Anatomy. By* WILLIAM E. HORNER, M.D. *Adjunct Professor of Anatomy in the University of Pennsylvania, Surgeon at the Infirmary of the Philadelphia Alms House, Member of the American Philosophical Society, &c. Philadelphia, Carey, Lea & Carey*, 1829. *Pp.* 460, 8*vo.*

It is with unfeigned satisfaction that we direct the attention of our readers to a rich and original American collection of some of the most interesting facts in pathology, by Dr HORNER of the University of Pennsylvania. Our pleasure is enhanced by the discovery that home observations made with the greatest care, free from all undue bias, are confirmatory of those made abroad, and especially in the schools and hospitals of France; respecting the credence due to which latter some of our brethren have displayed what we must call an excessively morbid scepticism. The author of the work before us is, we are happy to see, above the silly vanity of laying claim to an originality in inquiry or discovery, which can only find support by a voluntary or ignorant oversight of the labours of his predecessors and contemporaries in the same field. He claims no merit as the founder of a system; but in return he may be, as we doubt not he is, well satisfied to pursue a path illustrated by a BICHAT and a BROUSSAIS. Indeed he tells us very explicitly, that in point of professional faith he is an avowed adherent to the modern school of physiological medicine, at least in its doctrines. He has therefore, both in the classification of subjects and in the ideas inculcat-

ed, used freely the publications emanating from that school. To the reader who is fond of such comparisons a reference to these works will show a common origin. The author then mentions, as those which have been most serviceable to him, the Examen des Doctrines Medicales par F. J. V. Broussais: Exposition des Principes de la Nouvelle Doctrine Medicale par M. J. A. Goupil: Pyretologie Physiologique par F. G. Boisseau: Nouveaux Elemens de Pathologie par MM. Roche et Sansom.

But prior to this avowal Dr Horner in a short preface tells us,—what readers have a right to expect from every medical writer who wishes to obtain credence for fidelity of observation and narrative,—the opportunities enjoyed for enriching the department of which he now treats. These have been neither few nor unimportant. Successively army surgeon during a very active and sanguinary campaign; attached to the anatomical department in the University of Pennsylvania, under the guidance of the celebrated Wistar; associated in the labours and honours of teaching anatomy with Dr Physick, the father of American surgery; and finally a prescribing surgeon to the Philadelphia Alms House Infirmary, Dr Horner has been placed in the most eminently favourable situations for prosecuting the study of morbid anatomy. It is not sufficient, however, that opportunities be presented to an individual if he be wanting in the necessary talent and industry to avail of them profitably. No very large additions can be made to the existing amount of human knowledge by sudden and irregular labours, however great the genius or ardent the zeal. It is by persevering and untiring effort that we can alone hope for success in this particular: the progress is for the most part slow, often imperceptible, but under such auspices always sure. The author of the treatise on Pathological Anatomy is a marked example of the correctness of this maxim. Without any preliminary trumpeting or boastful promise, he marches on steadily to his purpose, overcoming in succession every obstacle opposed to his progress, and finally winning the highest honours of his profession, during the time that others are opening some new and royal road, or attempting to carry all by a *coup de main*. To the younger members of our profession, who have as yet hardly traced out with any distinctness their line of operations, such an example cannot be without great value, and in this belief we take the present occasion to press it on their notice.

In addition to his public facilities for adding to the stores of pa-

thological anatomy, Dr HORNER has enjoyed others of a private and confidential nature, alike creditable to himself and his professional brethren. We advert now to his continually assisting in the *post mortem* examinations of the physicians of this city, by which means he has also obtained many of the most prized of the preparations in the anatomical museum.

The introduction to the work is chiefly a brief sketch of the benefits obtained from a knowledge of pathological anatomy, and a notice of the writers who have most carefully and largely contributed to it. On the first head the author holds the following appropriate language.

"Without pathological anatomy it is very possible for a physician to be fully instructed in the literature of his profession, to be versed in the theories of all the celebrated teachers from HIPPOCRATES to the present time, to have an intellect perfectly sound in the processes of induction, to be continually exercising his judgment and skill in the treatment of diseases; yet if he has not accurately depicted on his mind the morbid lesions which are going on in the system, it is impossible to exercise his calling as a science, and, as has been pithily observed*, he will have seen many patients but no diseases. Execute dissections, and a new horizon is unfolded to view. The darkness which hung over his path becomes a brilliant and a shining light; the uncertainty which attended his steps is converted into assurance; the mistakes of prognostics which compromised his character are converted into the prophecies of a superior intelligence. Such is the difference between the practical and the speculative physician; between the man whose studies have been chastened by a continued reference to the evidences of dissections, and one who has resisted or neglected them."

The influence of pathological anatomy upon medical jurisprudence is so distinctly felt and avowed by the Germans, as to have induced them to apply to it the term *Anatomia Forensis*.

The author pays a proper tribute to the genius of BICHAT "whose masterly and brilliant idea of the elementary tissues of the body, so well developed by him that he has left nothing to be added, and nothing of consequence to be detracted, furnished exactly those principles for pathology, of which it stood so much in need." He receives with too little reserve, however, as authentic, what is called the *Dernier Cours*, &c. of the celebrated Frenchman. There is much reason to doubt whether this ever emanated directly from BICHAT.

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* CRUVEILHIER, Anat. Pathol. p. 10.

Next follows a brief review of the works on pathological anatomy. The first special treatise on this subject was by that indefatigable anatomist THOMAS BARTHOLIN, in 1674. Following this was the "Sepulchretum," by THEOPHILUS BONETUS, in 1679. The best edition of this work, the materials of which have served more or less for the principal works that have appeared since, was published at Leyden in 1700, with notes and additional observations by MANGETUS.

After a long lapse of eighty years the world was favoured with the famous work of MORGAGNI on the Causes and Seats of Diseases, published in 1761 in Venice. It has been "justly styled one of the most precious monuments of our art; and its dissertations, couched in the form of letters, abound in the most profound and judicious criticism united to the most exact observations of nature." The great objection to MORGAGNI's work, independently of its obscurity and verboseness of style, is the artificial division of diseases, adopted by the author, into those of the head, thorax and belly, and into the chirurgical and universal disorders.

Shortly after the publication of MORGAGNI appeared the treatise of LIEUTAUD, entitled *Historia Anatomico-Medica*. The little dependence which even the countrymen of LIEUTAUD place on his authority is not, we think, indicated with all desirable clearness by Dr HORNER. His own opportunities, either first as a physician to a hospital at the small town of Aix, or afterwards as court physician at Versailles and Paris, were not such as to inspire confidence in his experience. The pretensions of his other work, *Synopsis Universæ Medicinæ*, to regular arrangement and philosophical doubt have been fully exposed by CULLEN in the introduction to his First Lines. Of the one now under notice we may say, with an able Frenchman, that its chief merit in the eyes of physicians, and as a book in libraries, is as an historical monument of the bibliographical and literary part of the science.

BAILLIE's Morbid Anatomy, which appeared in England in 1793, is characterized as "a work universally esteemed for the correctness of its plates and the succinctness and accuracy of the text. Most of the organic alterations known up to that time are delineated in it. The writer enjoyed in its composition unusual advantages;—a highly gifted and cultivated mind,—an indefatigable zeal,—and a close connexion by consanguinity with the two Hunters, which opened to him when a young man the treasures of their ex-

perience." The "Morbid Anatomy" is stated to be, as a system, defective; "its facts and observations not being connected with any leading principles or rules."

"The course of Medical Anatomy; or elements of the anatomy of man, with physiological and pathological remarks" by M. PORTAL, professor of medicine in the college of France, published in 1803, "abounds in the learning of the day in which it was published, and is a most excellent addition to our stores of pathological anatomy; yet not being founded on the principles of general anatomy, the same objections bear upon it as upon preceding treatises."

The publication of PORTAL's work was posterior by three years to that of the treatise *on the membranes*, and by one to the death of the celebrated author of the latter. It could hardly have been expected however that a professor in the college of France, and the adroit medical courtier, should adopt as his model the views of the young and enthusiastic anatomist. Genius is not so all powerful as to make itself heard with pleasure at the very moment of its first outpourings: time, distance, age are required to take off the first shock which is always painfully felt by contemporary vanity. PORTAL still lives, and, as the phrase runs, is full of years and honours, since he is president of the royal academy of medicine, and physician to the king. How different is the celebrity attached to the name of BICHAT—his early death left no offices vacant or decorations for a successor; but in his works we have a noble and enduring monument of his fame, which shall outlast all that courts and academies can confer.

About the same period in which BICHAT gave his last course of pathological anatomy, "M. DUPUYTREN, the present celebrated surgeon of Paris, being then the dissector in chief of the school of medicine, undertook a similar course. Availing himself of the vast field in which he was placed, and collating the labours of his predecessors and contemporaries, he executed a scientific course, in which, abandoning the routine of special anatomy and of nosological classifications, he adhered simply to the nature of the altered texture and to its symptoms, and thereby produced a complete and detailed classification of organic lesions. It is stated* that from this course were obtained the fundamental ideas of BAYLE and LAENNEC on the classification of morbid structures and tumours."

CORVISART, physician to Napoleon, of whose skill in diagnosis

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* CRUVEILHIER, p. 20.

the emperor entertained such an exalted opinion, may be ranked as among the ablest contributors to the branch of which we are briefly describing the history. The work on the Diseases of the Heart has taken its place among our most esteemed medical classics. CORVISART had the additional merit, or as we might say good fortune, to usher into general notice, by a translation and copious commentaries, the almost forgotten and undeservedly neglected work of AUENBRUGGER on percussion as a mode of detecting diseases of the thorax. "These two writers, AUENBRUGGER and CORVISART, may be justly considered to have led the way to the highly finished and unequalled work of LAENNEC in 1819, on the diseases of the thorax, entitled a Treatise on Mediate Auscultation and the diseases of the lungs and heart, where the use of the stethoscope is set forth so advantageously. Other works also of great merit have appeared within the last ten or twelve years. Time will not permit me to do more than designate them: they are BAYLE on Pulmonary Consumptions; BERTIN on the Diseases of the Heart and Large Vessels; ANDRAL on the Diseases of the Gastro-Intestinal Mucous Membrane, BILLARD on the same subject; ROSTAN on the Brain, LALLEMAND on the same subject; OLLIVIER on the Spinal Marrow; GENDRIN on the Anatomical History of Inflammations; and many others."

The author, unwilling to swell the catalogue, does not mention the names of SERRES, LOUIS, MARTINET, SENN, DUGES, all worthy of commendation for their industrious researches in pathology.

He is more explicit on the services and merits of M. BROUSSAIS. His remarks on this subject are so pertinent that we cannot refrain from giving them insertion in this place.

"M. BROUSSAIS, in his history of Chronic Inflammations, has in my opinion rendered a service to pathological medicine of the utmost importance; and no one ought to consider himself as having accomplished a proper course of professional study who has not perused it with such deep attention as to be thoroughly impregnated with his principles. Commencing his professional career with an earnest desire to understand thoroughly all the vital and morbid phenomena of pulmonary consumption; he assembled the facts on the subject reported by different authors, expecting by their approximation to draw some sound general conclusions. He was, however, disappointed; he found in his mind an immense void, which compelled him to ascend to the first source for himself, and by interrogating nature there to learn from her those operations which, in the uniformity of her laws, she never ceases to present.

Under this impulse he became charged with a military service of great extent, where crowds of soldiers were labouring under the disease which he wished to explore. In these circumstances he had the resolution to collect and digest for himself the history of each individual case, to set down its symptoms from day to day, with its treatment, and to observe its progress till its termination, either in a perfect return to health or in death. When the latter occurred he executed or superintended the dissection of the patient for himself. Pursuing this course rigidly for three years, 1805-6-7, in the midst of the brilliant campaigns of the French in the north of Europe [Germany and Poland], he found himself at length in possession of all the facts he desired, in regard to both chronic inflammations of the lungs and of the abdominal viscera. The first edition of this work appeared in 1808, since which three others have been published, the two last in rapid succession. The result of the inquiries of M. Broussais is, that the cellular tissue is the leading seat of inflammation in most organs, and that the activity of the inflammation seems to depend very much upon the relative quantity of that tissue. That the analogies of chronic inflammation in all the organs of the body are very strongly marked, but that it is modified by peculiarities in the texture and composition of organs. That the principles of inflammation being uniform both in the acute and the chronic stage, with an allowance for differences of texture, one may apply to all the organs of the body what he has narrated concerning the progress and production of inflammations in the abdomen and thorax. That the period when one made especial beings of the disorganization of the lungs, of the bosom, of the testicle, of the neck, of the uterus, was one of superstitious darkness in our profession, and which has given way to the lights of a physiological doctrine. That an osteo-sarcoma, a spina ventosa, a chronic peripneumony or gastritis, recognise the same original principles, and exhibit results differing from one another, not in the essence of the disease, but from peculiarities in the tissue assailed. That chronic inflammations of organs essential to life destroy more individuals than pestilence and the sword added together, and that these sorts of derangements have been very much overlooked or not properly appreciated by any of his predecessors."

As connected with this topic we give the concluding paragraph of Dr Horner's introduction, the opinion expressed in which will allow, however, of much limitation. "Another remarkable feature in chronic diseases of long continuance is, that the affection is seldom confined to the organ primarily assailed, but most frequently excites chronic inflammation in others, principally such as are of most importance to life. Thus in pulmonary consumption we

almost invariably find chronic ulcerations of the mucous coats of the intestines, and the reverse; in chronic inflammations of the brain we find both intestines and lungs with chronic inflammations; in chronic inflammations of the bones and joints, pulmonary consumptions follow. In fine, the brain, the lungs and the intestines (gastro-intestinal surface?) seem to be three sentient points of the system, readily taking up primary diseases, and always responding to the diseases of one another and to those of other organs."

The opinion expressed above of the value of Broussais' History of Chronic Inflammations is that entertained by the most enlightened members of the profession who have given it an attentive perusal. But how small is the number of the favoured few who have access to this work—written as it is in a foreign language, and of which such a small number of copies are in consequence distributed through the United States. In expressing our deep mortification at booksellers having so long withheld from publication a translation of the *Histoire*, we but echo the feeling of a large number of our medical brethren who, both for themselves and junior friends and students, feel sensibly the privation of it. We say withheld from publication by booksellers, because to our knowledge more than one person qualified for the work has expressed his willingness to undertake to translate the work for a remuneration which, considering the size of the book, the popularity and celebrity of the author, and the acknowledged merit of the contents, is, in a business point of view, trifling. As a mere matter of speculation, any bookseller would, we are confident, run less risk in this undertaking than in publishing the trashy novels and inane books of travels which are so prodigally poured out on us. We had been led to expect that a gentleman fully competent to the task would ere this favour us with an English version—but we, perhaps in common with himself, have been disappointed. If, however, as an advertisement at the time seemed to imply, it was intended to give us an abridgment, in place of a full translation, we must rejoice at the delay. Such a course is both unjust to the author and injurious to the reader: the former is misunderstood and the latter misled: and what is of paramount moment, the cause of truth is periled by the obscurity in which it is thus needlessly thrown.

Of the twenty-five chapters into which the work of Dr Horner is divided, the first is entitled "general considerations on disease;"

the second is "on the form of disease;" the third is "on the phenomena of irritation;" the fourth on "sympathies;" the fifth on "irritations of the cellular tissue;" the sixth and seventh on "irritations of the mucous membranes;" the eighth on "chronic inflammation of mucous tissues;" the ninth on "mollescence of mucous membranes;" the tenth "*on the healthy and diseased appearances of the gastro-intestinal mucous membranes;*" the eleventh "on follicular inflammation of the gastro-intestinal mucous membrane;" the twelfth is on "dissections illustrating the pathology of the abdomen;" the thirteenth "on irritations of the pulmonary tissue;" the fourteenth on "phthisis pulmonalis;" the fifteenth, sixteenth and seventeenth on "irritations of the heart;" the eighteenth on "dissections of the thorax;" the nineteenth on the "general pathology of the nervous system;" the twentieth and twenty-first on "irritations of the encephalon;" the twenty-second on "mollescence of the encephalon;" the twenty-third on "irritations of medulla spinalis;" the twenty-fourth on "irritations of the nerves;" the twenty-fifth "dissections illustrating the pathology of the nervous system."

This table of contents will serve to give our readers an idea of the interest attached to the subjects treated of in this work.

Though "intended more especially for the use and guidance of practitioners of medicine," its author seems to have also had in mind a mere juvenile class of readers when speaking of the progress and terminations of disease, and of the nature of diagnosis and prognosis. From the last section of the first chapter in which these matters are treated of we select the following excellent, and, as one would think, obvious and yet often neglected precept. It is under the head of "the treatment of diseases."

"There is no rule of medical treatment of more general and useful application than that of the perfect repose of a sick organ; we have, therefore, to forbid all deep meditation to a sick brain, all vision to a sick eye, all conversation to an inflamed larynx and lung, all motion to an irritated and inflamed muscle, and to fractured or dislocated limbs. It is under the judicious and general application of this rule that Dr Physick has illustrated frequently his own unusual professional sagacity, and wrought many of his most unexpected and famous cures. As in all other things, there is a time for its useful application, and there is a time when it ceases to do good, and may do harm. For example, a joint which is on the eve of an anchylosis should be moved from time to time, in order to prevent

it; a brain threatened with imbecility or fatuity should be put on the moderate exercise of its faculties; an insensible eye or ear should in like manner be exercised."

In the second chapter "on the forms of diseases" we are told that "the natural succession of alterations of each tissue should be diligently noted from the commencement to the termination by death; and the first changes in an especial manner, as they are the principal and more important ones; such indeed as lay the foundation for all the others."

Red alterations of the different tissues are as follows* :—

1. "Redness, injection, swelling, and loss of cohesion in the tissues. It is commonly called inflammation, and is by far the most frequent of all primary changes, and the cause of many consecutive ones."
2. "Red indurations, granulations, vegetations, fungus, polypi."
3. "Vesicles, pustules, suppuration, erosion, ulceration, perforation, gangrene."
4. "Thickenings, granulations, opacity of tissues naturally transparent, adhesions, effusions of serosity, false membranes."
5. "Conversion of one tissue into another, such as into the cartilaginous, the osseous, the fibrous, the mucous, the dermoid, the serous, the cellular, the erectile."
6. "White induration, gelatiniform degeneration, tubercles, encephaloid matter, cancerous matter. These alterations succeed often to inflammation, but they are sometimes primitive; they are called in mass sub-inflammations."
7. "Contraction, obliteration or dilatation of natural canals."
8. "Accidental canals, fistula, accidental tissues, cysts."
9. "The development of gas in the midst of the organs."
10. "Living bodies developed in the midst of organs."
11. "Effusions of blood; collections of this liquid. These alterations are called hemorrhages, which are most commonly indicated by an effusion of blood externally during life."
12. "Productions which are cretaceous, stony, hairy, horny, melanose. The mode of formation of these alterations is not fully known."
13. "Changes in form and position, as wounds, ulcers, distensions, lacerations, ruptures, fractures, and dislocations."
14. "Foreign bodies."
15. "Vicious conformations."

"We are as yet unacquainted with the alterations of which liquids are susceptible; it is asserted that they may be altered

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* Roche et Sanson, loc. cit.

primitively: others maintain that their alteration is always consecutive to a previous alteration of the organs charged with their preparation. It nevertheless appears that in scurvy the composition of the blood is altered primitively. Perhaps it is also the case in other diseases; but to this day the proof has not been exhibited; and in the existing state of the science, it is not permitted to admit the primitive alterations of the blood and of other liquids but as possibilities. On the opening of dead bodies, the blood is found more or less liquid, of a natural or black colour, putrified; the bile green, yellow, black, pitchy, corrosive; the mucous is white, yellow, green, purulent, pultaceous, glue like, membranous; the serosity is limpid, turbid, thick, inodorous, fetid. But all of these alterations are without a known value, the greater part of them depend evidently on a primitive alteration of the tissues, and the same is probably the case with all."

We do not think that the arrangement adopted by the author, in which irritation is made to represent the class; and phlegmasia, hemorrhage, &c. forms or subdivisions, is a happy one: the more especially as he defines morbid irritation to be "only an augmentation of the natural interstitial actions of a part." Now irritation thus defined, so far from covering or including as a class the phenomena and symptoms of inflammation, hemorrhage, and the alternations of tissues above noted, is merely a stage of, or occasionally a predisposition to, these morbid forms. It does not require for its display either new elements or old ones under new combinations. Its domain is simply and strictly in the nervous system. When it is said to be present in other systems, it is either merely an excitation of these latter through the medium of the nerves, as in excessive functional action, accelerated circulation, secretion and muscular contraction, and the like; or, if there be organic change, the irritation is merged in inflammation; and we have new combinations presented in the altered state or proportions of the nervo-sanguineous expansions, with intervening cellular tissue, as in the membranes and organs generally. If we carry beyond the extreme limits excitation of the nervous system, and so stimulate it as to bring the capillary tissue into morbid action, we have no longer irritation, either nervous or sanguineous—we have phlegmasia and its subsequent stages and changes. Thus understood, irritation, as an excessive functional action of the nervous system, and transmitted to other systems over which this exercises control, may be allayed by various means, either hygieinic or therapeutical. These usually consist in withholding the common physiological stimuli, or giving certain drugs which

operate by directly diminishing, or in a measure benumbing, the activity of the nervous system. If it be mere irritation we have to deal with, these means will suffice; but if, in despite of these, the excitation of the other systems—sanguineous, secretory, &c. is sustained, we have something else besides irritation of these systems.

The problem is now a complex one, and its solution by the application of appropriate remedial ones correspondingly difficult. We are called upon to add and abstract in succession or alternation, which would not be the case in the mere "augmentation of the natural interstitial actions of a part."

We do not find in the expletives prefixed to irritation as a class a distinctive characteristic, either of physiological or pathological origin. Thus, for example, hemorrhagic as applied to irritation, taking this latter in the sense of the author, carries with it no idea of the seat of the irritation or of its degree: it serves at best but to express one of its modes of termination, and this even an accidental one. It is neither an evidence or measure of the irritation. On the same shewing we ought to admit an ulcerous, a gangrenous, or a dysenteric irritation, as if we had before us but a single phenomenon, isolated in a single tissue; whereas we have in fact to do with the phenomena of a compound tissue, viz. sanguineo-nervous, joined by cellular matter, for these are the necessary components of the part in which the hemorrhage occurs. The practical disadvantage of this nomenclature is the same as that experienced in our common nosological classification, viz. making us forget the successive phenomena of the malady in favour of an abstract term, and leading us to prescribe in consequence for an imaginary existence or essence, rather than for the lesion of an organ. It is by this means that empiricism is fostered by the host of specifics and antidotes, such as antidysenteric, antiscorbutic, &c. &c. So long as the example of false logic is set by ourselves, we ought not perhaps to complain very bitterly that empirics, with more extravagance and less conscientiousness, imitate it *ad absurdum*.

We venture these remarks with more freedom because they apply not so much to Dr Horner's own views as to those of the school whose nomenclature he has adopted. His desire to reconcile the latter with the former, will perhaps explain the discrepancy between his two definitions of irritation at pages 21 and 23. In the first instance, irritations, as a class, are defined to be "*alterations* of tissues, consisting in an unusual afflux of the habitual fluids of the

part, and in an augmentation of irritability." In the second he considers morbid irritation as "only an augmentation of the *natural* interstitial actions of a part," and "of course governed by the same laws."

There are six different forms in the local condition of irritation admitted by the author, viz. *inflammation* or *phlegmasia*; *hemorrhagic form* or *hemorrhage; sub-inflammation; neurosis* or *nervous irritation; nutritive irritation; secretory irritation.*

"The six forms of irritation are supposed to be identical, and merely to differ in the degree of intensity.* A strong objection, however, to this opinion is urged by MM. Roche et Sanson, to wit, that hemorrhages, inflammations and neuroses, have each degrees of intensity also, from very mild to very severe forms, and that it is far from being demonstrated that a very severe neurosis is below the lowest degree of sub-inflammation."

The third chapter, headed "*phenomena of irritations*," embraces sections on the different forms already given. In the concluding paragraph of the section on *phlegmasia* we read,

"In a very great majority of dissections, the traces of acute inflammation are satisfactorily manifested by redness, tumefaction, softening, suppuration, ulceration, induration. And in chronic inflammations there are other marks, such for example as a brownish colour in mucous membranes; purulent collections, adhesions, accidental tissues, and the development of tubercles, and morbid ossifications."

In the section on *sub-inflammation*, its leading anatomical characters are defined in an extract from Roche and Sanson "to consist in white tumefaction or engorgement of the tissues with induration; and the deposit of concreted lymph in the middle of the substance of organs. The tissues thus affected are also converted into homogeneous masses, white or greyish, in which no organization is recognized."

Sub-inflammation is attended, says Dr Horner, at first with but little heat or pain; and few or no symptoms arise from it for some time. "But, finally, if the tumefaction goes on regularly increasing, the sympathies of other parts of the body are strongly excited, and produce great distress; as for example in schirrus of the uterus, ovaria, &c. The temperaments most exposed to this form of irritation are where the lymphatic system predominates, as in women and children." In the latter it is not unfrequently evidenced in

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* Boisseau, Pyretologie Physiologique.

scrofulous tumours. When these or other tumours ulcerate we have a mixed inflammation in which both the white and the red vessels are in a morbid condition, as in cancer.

In the chapter on *sympathies*, after speaking of a leading one evinced in an unusual state of the circulation, manifested by the action of the pulse at the wrist, and the differences in the latter, the author goes on to say—

"It has for a long time been disputed by physicians whether symptoms of fever could occur without local irritation, or, in the language of the profession, whether there could be such a thing as an idiopathic fever. The new light which has been shed on pathological anatomy, has reduced very much the number of persons admitting it; and indeed seems to bid fair to remove this notion entirely as an error founded on our imperfect means of investigation."

In the *irritations of cellular tissue* are included *phlegmasia, chronic* or *sub-inflammation, secretory and mitritive irritations* of this tissue. The author very properly adverts in terms of censure to the common error of pathologists, who until lately took subcutaneous cellular phlegmon as the type of inflammation in all other parts.

"This mistake is probably as old as the science of medicine itself, and forms no inconsiderable part of the stupendous fabric of error which has been sapped to its foundation, and is now ready to fall under the influence of general anatomy, as developed by Bichat, and of physiological medicine as explained by the French pathologists of the present day."

From the experiments of Mr J. Hunter on the ear of a rabbit*, and from his own experiment on a child who had died during the eruptive state of measles, Dr Horner thinks there is no doubt that the vessels of an inflamed part are considerably augmented in volume, and remain so after death. The authorities to the same effect might if necessary be greatly multiplied.

"From the report of the French anatomists, Ribes, Velpeau and Gendrin, it appears that, in dissection of persons who have died with purulent collections in them, it is by no means unusual to find pus in the venous trunks which originate in the suppurated part. This occurs without an inflammation of their internal tunic, which under other circumstances might be alleged as the source of it: it is consequently absorbed by the radicles of the veins."

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* Treatise on Inflammation.

An account is given in pages 50, 51 of the disease and dissection, tending to shew the greater danger of abcesses of cellular substance when contiguous to organs important to life. The author considers erysipelas as primarily seated in the cellular substance, and differing from other forms of inflammation principally by being diffused instead of collected in a focus. When the skin becomes affected, the disease passes from the sub-cutaneous into the cutaneous cellular tissue by continuity of structure. We are not by any means satisfied with the correctness of this explanation. That the common cellular tissue is affected even to suppuration, at the conclusion of what is called phlegmonous erysipelas, we can have no doubt: but we believe, that if the sensations of the patient and the phenomena presented to the medical attendant be taken into careful consideration, the strictly cutaneous location of the disease and its very slight effect on the subjacent cellular tissue will be in many cases admitted. It is only by regarding it as a membranous inflammation that we can explain or understand, from the analogies of other membranous affections and the effects of morbid impressions on the skin, the frequent metastasis occurring in erysipelas, by which the membranes of the brain or of the thoracic and abdominal cavities are so frequently affected, consequent on erysipelatous disease of the skin. The sympathies of the cellular tissue proper, though prevailing with the vital organs, are not of this nature in regard to frequency or effect.

For reasons already assigned we must object to the term *nutritive irritation* of the cellular substance, which to most readers would more naturally convey the idea of imperfect and deficient than of excessive nutrition. If irritation mean here simply hypernutrition, it is used in a physiological sense, and of course is misapplied. If we are to understand that the nutritive process was morbid, the disease or irritation, as the author would call it, ought to be evinced in the entire nutritive organs or apparatus, that is both in absorption or waste, and deposition or supply, and, as in all other forms of irritation, ought to diminish functional power. Now in the instances before us there is but one set of vessels morbidly or excessively active, to wit, those of deposition or secretion. The argument in favour of applying the term nutritive irritation to marasmus, therefore, would be just as strong in the above, because here one set of vessels, the absorbent, are preternaturally active or irritated.

In speaking of the serous membranes, the author premises the established fact, that consisting, as they do, of condensed cellular substance, they present a very strong analogy to the latter in their pathological changes.

"The serous membranes are subject to acute and to sub-inflammations; to hemorrhagic and to secretory irritations; and they also present transformations of their appropriate tissue into one which is fibrous, cartilaginous, bony, &c.; all of which may be attributed to a slow irritation." The organs with which these membranes most readily sympathise are the heart, lungs, liver, spleen, stomach and womb. Some interesting remarks are made on *phlegmasia* of the serous membranes, and of the changes which they undergo by thickening and false membranes; but we have not space to introduce them here. Pain, excessive in the acute inflammation of the serous tissue, is far from being the invariable concomitant of its chronic or sub-inflammation.

In the five following chapters, from the seventh to the twelfth, the author investigates the different states and appearances of the *mucous membranes*. Their great extent, varied functions and numerous sympathies entitle them to rank foremost in the eye of the pathologist and physician. The derangements to which they are exposed are *phlegmasia*, *sub-inflammation*, *hemorrhages*, *gangrene*, *ulceration*, *cysts*, *hairs*, *horny productions and various degenerations*; also changes in the quantity and quality of their appropriate secretions.

The sympathies between mucous membranes and the glands whose excretory ducts open into them are very marked, and worthy of the serious attention of the physician. "We see in them the foundation of what modern pathology has asserted, that the irritations of glands opening along a mucous surface are generally preceded by the irritation of that surface itself; consequently, glands are seldom primarily affected*, unless from local violence.

The acute inflammations of mucous membranes are, according to Dr Horner, "presented under three leading traits: these are the erythemoid, the pseudo-membranous, or that which is disposed to take on the secretion of coagulating lymph from the inflamed surface, and the follicular or pustulous. These different forms of in-

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* Broussais, Prop. 150, &c.

flammation seem to depend upon the portion or constituent of the mucous membrane, which is the seat of inflammation ; the follicular being situated in the cryptae and muciparous glands, and the others in the common membrane or derm."

The degree of sensibility of these membranes in a state of inflammation is variable. The difference will generally be found to depend on the more or less direct connexion of the part with the cerebro-spinal axis, by means of the nerves of this system or division. Hence the stomach and colon, mouth and anus will suffer more from pain than the small intestines and the ileo-cœcal valve ; these latter being supplied by the great sympathetic.

So much debate has of late years arisen respecting the colour of inflamed mucous membranes, and the subject is one of confessedly such importance, that our readers will, we are sure, be gratified to learn the opinion held respecting it by the author of the work before us. We shall give his own words as follows under the head of the *erythemoid inflammation.*

"The colour of inflamed mucous membranes, depending as it does upon the state of circulation of the blood and the intensity of the irritation, is heightened beyond the natural standard, so as to present every variety of hue from a lively rose colour to a deep brown. In some cases it occupies a very extensive surface and is uniform ; in others it is in parti-coloured patches ; in others again it is arborescent, after the mode and place of the vascular ramifications. In others again, and especially in the stomachs of old drunkards, there are spots of red, which, when examined with a microscope, are seen to consist of a congeries of very fine points, as if the red blood had been extravasated by a few globules at a time, at the very end of the capillaries in the surface of the mucous coat. These spots, consisting in collections or aggregations of microscopical points, are insular, and leave meandering interstices between them like the winding of a river among clusters of islands and rocks. The French pathologists mention another form of the redness of erythematous inflammations, which I do not remember to have observed upon mucous membranes, to wit, in zones.

"The inflammatory redness has seldom an abrupt termination at its margins, but is lost by degrees in the adjacent parts. It is so identified with the structure of the mucous coat that it cannot be removed or pushed from place to place by pressure, like the colour which is natural to parts, or which has come from congestion depending upon an obstruction of the respiratory organs. Maceration in water removes it much more slowly than it does a redness from mere accumulation of blood. Another evidence of inflamma-

tion having existed in mucous membranes is, that the surfaces not occupied by vascular effusions or injections have their natural pearl colour changed into a dirty yellow, resembling somewhat that of a jaundiced skin; and the membrane, upon being raised up and held before the light, will be found to have lost much of its natural transparency.

"Though redness be generally the effect of mucous inflammation, yet if the latter be from some very active cause which produces death in a short time, before the red globules have time to identify themselves with the mucous membrane, or to be extravasated in considerable numbers in its thickness; the redness in such case leaves frequently very indistinct and even no traces after death. Some cases of this kind to be hereafter referred to more particularly have occurred to me. The rule which has been established by M. GENDRIN, from an observation upon the conjunctiva of a consumptive patient, and from experiments upon the conjunctiva and trachea of dogs irritated by chemical articles, is, that when the inflammatory redness has reached only to vascular arborizations not very fine, it may disappear upon death; but if it has gone beyond this point it remains. He also infers that the vessels of mucous membranes will not admit an injection when they are in a state of inflammatory congestion."

In reference to the tumefaction or thickening of these we are told by the author "that it appears simultaneously with the redness, or a little before it, and keeps pace with it, augmenting continually until the redness is at its highest degree."

During the evolution or progress of inflammation, the density of a mucous membrane is augmented; but towards the decline of the inflammatory process its tissue is softer than in the normal state, and "sometimes so pulpy and disorganized that the slightest handling, or even sweeping the finger over it, will tear it up from its attachment to the subjacent cellular coat. This softened state, (*ramollissement*), though common to all mucous membranes, occurs more frequently in the stomach and bladder; at least in my proper (own) experience I have met with it there oftenest. In such cases the inflammatory redness most frequently has disappeared, and the membrane looks as if the blood had ceased for some time previous to death to penetrate it."

There is a state of the membrane pointed out by the author which seems to be intermediate between œdema and inflammation, in which the subjacent cellular tissue becomes largely infiltrated with serum, at the same time that the redness and vascularity are but indifferently marked.

"The muciparous glands and follicles of the mucous membranes are much disposed to participate in their acute irritations; they swell, become softer, and are infiltrated with a fibro-albuminous matter, which is of a red gray colour, and is rendered very apparent by maceration for a few hours."

The assertion of GENDRIN that absorption ceases upon mucous surfaces during their inflammation, at least upon the greater number of them, is so far qualified by Dr HORNER as to except watery fluids of a mild kind.

We pass over the remaining sections of this chapter and the two following, or the 8th and 9th, to arrive at that in which *the healthy and diseased appearances of the gastro-intestinal mucous membrane* are described by the author, from observations and experiments made by himself. He coincides in general with M. BILLARD in the statements which this latter has given both in regard to the healthy and to the pathological appearances of the gastro-intestinal mucous membrane.

The *experiments* made by Dr HORNER, five in number, were two on sheep and three on rabbits. The sheep were killed first by cutting their throat, and immediately afterwards dividing the spinal marrow in front, between the occiput and first vertebra. Two of the rabbits were killed by puncturing the medulla spinalis in the same place as that just described; and the third twenty-five minutes after an exposure of its abdomen.

It is difficult to convey by words an accurate idea of the shades of colour exhibited by the mucous membranes. On this account the author has very wisely added coloured plates of the parts which he describes, and by which the value of his work is not a little enhanced.

The stomach of a rabbit cut open along its greater curvature, twenty minutes after death, and the contents turned out, exhibited on its coat, when well washed, a lake colour approaching to vermillion, uniformly diffused, as in the former experiments on rabbits. In all, the right half of the inner gastric surface was of a dull pearl. The difference probably arises, as the author suggests, from digestion being chiefly executed in the left half of the stomach.

We must express our regret that Dr HORNER did not give still greater weight to his inferences by more numerous and diversified experiments, so as to have included many of the carnivorous animals. His known industry needs, we know, but a hint to a still farther display of it in this line of useful inquiry.

The example of a healthy mucous gastric coat in the human subject, as given in p. 124, and illustrated by a beautiful coloured plate, is thus described: It is "of a bright brown, or light, warm, sienna colour, which may be considered as the state of the stomach immediately subsequent to digestion, as the individual had taken a glass of cream a few hours previously." The disease of the heart of which this person died is, we must remember, often associated with a morbid condition of the stomach, and but for other evidences adduced by the author, would give us no warrant of our finding a healthy gastric mucous membrane. Observations third and fourth in the work are corroborative of the characters just assigned by the author to a natural appearance of this part. We could wish that the examples had been more numerous. We ought to have mentioned that the internal membrane of the stomach of the sheep which were killed was of a pearl colour, slightly yellow, approaching to what artists call a tint of bright brown; the intestines were almost exactly like the stomach.

The second question which the author proposed to himself for solution was, *the colour of the mucous membranes from passive congestion?* By congestion he tells us that he means "an accumulation of red blood in any part or organ of the body, without irritation or mechanical violence."

"The congestion of red blood in any part of the body is commonly produced by an obstruction of one or more of the large venous trunks which return blood to the heart." And again. "It is possible to produce a congestion of the whole nervous system by obstructing the general circulation." In asphyxia from drowning, hanging, or inhaling the irrespirable gases, "the mucous membrane of the lungs, wanting in this case the usual stimulus of atmospheric air, refuses passage to the blood from the ramifications of the pulmonary artery into those of the veins, and a complete arrest is thus put upon the general circulation. The lung becomes the seat of a congestion or engorgement in its capillary system, and all the mucous membranes of the body suffer in the same way." BICHAT's experiments are quite conclusive on this point. The lividity of the surface of the body and its mucous membranes may be made to come and go at pleasure, by interrupting or restoring the freedom of respiration.

The author, after some further preliminary remarks, gives an account of the dissection of a patient in the Philadelphia Alms House,

who died of slow asphyxia, and whose stomach and bowels are stated to have been congested from this cause.

"Stomach common size, of a pearl colour on peritoneal surface. Internal or mucous coat covered with mucus, tinged with bile, corrugated, light pink colour generally; summit of rugæ, from accumulation in capillaries, appeared like red streaks at the distance of six feet, from being covered with minute dots of red, of the size of a needle point. No large patches of ecchymosis or red blotches, so conspicuous in inflammation.

"Intestines—mucous coat covered with similar small dots or points of red. Internal membrane of colon slightly tinged with red dots. Besides the hardened feces in the commencement of this viscus there were some small pieces of it along its course."

Small tumours were found hanging over the glottis, which were drawn into the rima glottidis in every act of inspiration. "*These tumours produced his extreme difficulty of breathing and final suffocation.*"

However interesting this case may be regarded, we can hardly receive it, a solitary one, as furnishing an adequate standard of the appearances of the mucous, and especially the digestive mucous membranes from congestion.

The third point connected with the natural colour of these membranes, on which Dr Horner proposed shedding light, was the change brought about by red inflammation of these parts. In this section of the chapter we read some good remarks on acute inflammation, its common seat in the capillary system, the fugitive traces which it often leaves behind—all not the less instructive because destitute of pretentions to novelty. Reference is made to the appearances of the stomach when the patient dies of acute inflammation, and to the dissections of this organ by Drs Physick and Cathrall on persons dead of the yellow fever. In these latter cases the inflammation was exactly similar to that produced by arsenic.

"The red blotches, which form the leading anatomical character of acute mucous inflammation in malignant fevers, may be readily produced by chemical irritants." An example is given of the effects of the application of corrosive sublimate to the stomach of a rabbit, the inner surface of which was, when the cavity was opened and the food turned out, of a scarlet-lake colour, becoming, after wiping or rubbing the mucous coat with the hand, of a crimson lake.

"At the place where the corrosive sublimate was applied *there were irregular oblong red blotches, two or three lines broad.*"

In a fatal case of acute gastritis and peritonitis in a female after miscarriage, "the stomach presented a degree of inflammation over its whole mucous coat, not often surpassed even in yellow fever. Some inches square of its middle were almost in a state of sphacelation from congestion and extravasation of red blood. Small clots of black blood were found among the contents of the stomach, but there was no black vomit." A coloured plate of these appearances is given in the work. Like illustrations are furnished of those left by "acute gastritis supervening upon a chronic one arising from intemperance, and attended with arachnitis of the cerebrum." There are thirteen observations enriching this section on "*the red inflammation of the mucous membranes*,"—all possessing interest and guiding to useful inferences. A more ample summary than that given by the author would have been desirable at the end of the chapter, in order to aid the reader in combining in a single picture the numerous isolated facts scattered through it. The following are his concluding remarks:

"It is now proved that the redness arising from simple congestion, like the redness from injection, is uniformly diffused; whereas the redness from inflammation is generally partial and in patches; sometimes in the mucous membrane of the cardiac extremity of the stomach, and sometimes in that of the pyloric extremity.

"Simple obstruction to the current of blood during the agonies of death could never produce such appearances; for if it could, we ought to meet them invariably. On the contrary, where an obstruction does occur, which I am disposed to believe is very uncommon in natural death, whether this obstruction arose from the liver or from the lungs, the arrest of blood should be manifested by a uniform tinge of red in the organs concerned, not by patches here and there. Such marks of obstruction should also be more frequently seen and better developed, in cases of enlarged, indurated liver, in consumption, in dropsy of the thorax, and in all cases of obstruction of the lungs." Pp. 169, 70.

In another place, a few pages back, the author tells us "that the most extreme irritations of the stomach may exist during life, and may even be fatal, but yet not manifested after death by unusual redness of the tissues affected. It would indeed be unphilosophical and inconsistent with pathological observations on other parts, to expect from the stomach an invariable manifestation of disease, by redness and injection of its mucous surface after death. Let the redness of the skin in erysipelas be ever so strong during life, it frequently disappears wholly by the retreat of the blood from the

capillaries upon death. Measles are similar in this respect, and the fact already mentioned is very worthy of attention, that if a fine injection be thrown into a subject who has died at the height of the eruption, the vessels originally dilated by the irritation manifest themselves by the greater quantity of injecting matter they receive; or in other words, the eruption may be renewed after death, as I have satisfactorily ascertained by experiment."

To resume the notice of the subjects discussed by Dr HORNER in the order in which he presents them, we must revert to the seventh chapter, in which, as our readers will remember, we extracted his remarks on erythemoid inflammation; after this he treats "of the *pseudo membranous inflammation of mucous membranes.*" This is considered by Dr H. as merely a different state or stage of the same action by which the erythemoid is produced. Membraniform concretions have been found at different times lining all parts of the mucous system. With those in croup we are tolerably familiar. They are not uncommon in the alimentary tube. M. GENDRIN relates his having seen the *stomach* of a man, aged thirty, who died in the eighth day of gastro-interitis, lined with a false membrane in the whole extent of the pyloric half: the mucous coat was uniformly erythematous, sensibly thickened, and easily detached in shreds. *Pustular phlegmasia of the mucous membranes* is next described—*then chronic inflammations of mucous tissues* in the following or eighth chapter. Under this latter are valuable remarks on ulcerations of these parts. "The order of frequency with which they occur in the alimentary canal is as follows: the beginning of the colon first, then the ileum, especially at its lower end, the termination of the colon and the beginning of the rectum, the stomach, the transverse colon, the jejunum, and lastly the duodenum."

The ninth chapter is taken up with a consideration of that variety of morbid condition called *mollescence or softening of the mucous membranes*, first clearly pointed out by LOUIS in a memoir on the subject in 1824.

The eleventh chapter is on a subject of great interest to the American practitioner, viz. "*the follicular inflammation of the gastro intestinal mucous coat in children, and its probable identity with cholera infantum.*" Whatever opinion the reader may arrive at respecting the correctness of the author's theory of cholera, he cannot fail to derive benefit from a perusal of this chapter. For

ourselves, we can readily admit that the disease in its first stage is confined to the muciparous follicles of the gastro-intestinal mucous membrane, and that in this respect it has a similar location to all the irritations or catarrhs of the mucous membranes in general, whether lining the pulmonary or digestive or genito-urinary passages. But we think, also, that it, in common with these latter, is supported and aggravated by an extension of the irritation, and finally inflammation to the mucous membrane proper. This view of the disease will, we apprehend, be confirmed by an observation of the symptoms and the appearances on dissection.

Dr HORNER in treating this subject expresses in a note, p. 188, his regret at not having been able to obtain the work of RŒDERER and WAGLER, *De Morbis Mucosis*, in the United States. This is either an inadvertence, or we must presume that the author means that he was unable to become the possessor of a copy for his own use, since two of his medical acquaintances, we might say friends, in this city had each a copy of the work at the time of his writing, and another is to be found in one of the public libraries.

Had we hoped or intended to furnish our readers with an analysis of the work of Dr HORNER so minute as to free them from the necessity of having recourse to the original, we should apologise to them with many expressions of regret for not being able to continue and complete our review. But we have had no such intentions even in respect to that part from which our extracts have been most copious. The work is composed of too many details, and is of too varied a complexion, to allow of our giving a miniature after our own fashion, and passing it upon the public as a substitute for the original. We have furnished enough to enable practitioners of medicine, for whom the work is more especially intended, to judge of its features and general character. Our selections have been made rather to gratify the intense curiosity now prevailing about certain points in pathology, than perhaps from an entire conviction of their being the most important in themselves or most creditable to the author. Did time and space allow we could enlarge with great satisfaction on the other portions of this volume, especially on the chapters treating of the *general pathology of the nervous system and irritations of the encephalon and nerves*. The morbid states and alterations of the heart are also described with commendable accuracy, and illustrated by valuable details furnished from the author's own obser-

vations. Nor should we be doing him justice were we to omit noticing in terms of approbation his account of *dissections illustrating the pathology of the abdomen.*

Let it be, in fine, to the praise of Dr HORNER to have supplied the profession with a valuable repertory of pathological anatomy, the originality of which is of far higher moment than the adventitious merits of elegance of style or felicity of generalization.

ARTICLE III.—*Les Médecins Français Contemporanis; par I. L. H. P***. 1re. et 2me. Livraisons. 8vo. Pp. 112. 109. Paris.*

*French Cotemporary Physicians. By I. L. H. P***. 1st & 2d Parts. 8vo. &c.*

To portray the professional worth and to sketch the characters of French cotemporary physicians, some of whom enjoy a great and wide extended renown, and hold high and influential offices, and to do it in an impartial and able manner, is a task of great difficulty and some danger, and from the performance of which a man of modest deportment, ordinary talents and feeble courage would probably shrink with dismay. In France, as indeed in every other country, it is not to be presumed that the members of the profession, however elevated in rank some may be above the rest of their brethren, are all endowed with that sentiment of moral rectitude—that purity of character of which Hippocrates and a few of his successors have offered us such illustrious examples. Nor is it to be imagined for a moment, that, when submitted to close examination, the reputation they may have acquired, either at home or abroad, will invariably be found well merited. So far from this, we believe it may safely be affirmed, that in some many weak and assailable points will be discovered, and that in more than one among them the investigator will readily find that knavery predominates over good faith and honest feelings, and quackery over real scientific worth.

To perform the task of professional censor in a creditable and

useful manner is, we repeat, somewhat difficult, and attended with some danger. It requires not only a considerable share of knowledge in the different branches of science pursued by the individuals submitted to examination, but also a profound acquaintance with human nature, a considerable fund of impartiality, and great independence of character. Without these qualifications the censor will run great risk of proving tiresome to his readers, of falling, from the fear of offending influential personages, into a strain of praise when the true state of things would call for severe censure and direct refutation; or to impart the belief that his criticisms are dictated by other motives than a love of truth and a desire of promoting professional respectability.

While admitting the difficulty and danger of the task, our readers will doubtless join us in the belief of its usefulness, since they must all be aware that nothing can more effectually induce men to follow the path of propriety, and to aim at distinction in their respective professions, than the certainty of receiving the praise, or being lashed by the pen, of a judicious and impartial critic.

The author of the essays before us has, we believe, acquitted himself with great credit of the task he has not feared to undertake. In his criticisms on scientific points connected with his subject he displays vast acquirements and a more than usual share of acquaintance with the various branches of the healing art, and reasons in many instances like a profound medical philosopher. His delineations of character are often happy in the extreme, and always lively and attractive; and these qualities, united to great vivacity and correctness of style, render his essays the most instructive and amusing of the kind that have as yet come within our reach. We have no doubt that our readers will feel a good deal surprised, after this expression of our opinion respecting the merits of this work, to learn that the author (who, though anonymous, is well known in France) is not a medical man, and has prosecuted the study of medicine simply as a subject of amusement, and not with a view of seeking the honours of the doctorate or engaging in the drudgery of practice.

Of this work, which appears in fasciculi, only two numbers have as yet reached this country. They contain notices of twenty-two physicians: namely, of Messrs Broussais, Alibert, Coutanceau, Berard, Adelon, Civiale, Chaussier, Desgenettes, Dubois, Pelletan, Recamier, Richerand, Landre-Beauvais, Dupuytren, Chomel, Marjolin, Desormeaux, Deneux, Clarion, Fiz-

EAU, GUIBERT and BOUGON. Some of these gentlemen are highly praised for their scientific and professional acquirements, others for their personal worth, while others are treated without the least reserve, and justly held up, notwithstanding the high offices they occupy, as fit objects of ridicule and contempt. As we cannot, in the limited space allotted to this article, offer a detailed account of the merits and demerits of all or even a few of the above named physicians, we shall limit our remarks to the first only, and leave the consideration of the most conspicuous among the rest for some future number of this journal. In doing this we shall not confine ourselves strictly to the work before us, but make use of the remarks of other writers, and of our own notes, collected during a residence of many months at Paris.

In a former number of this Journal some pains were taken to show that the practice founded on the physiological doctrine could, if restrained within just bounds, be productive of the most advantageous results ; but at the same time the writer did not hesitate to affirm that, when applied to the fullest extent, it might give rise, and has actually given rise, to the most baneful consequences. From this it will not be difficult to conclude that he thought favourably of many parts of the doctrine in question, while he disapproved, to a greater or less extent, of other parts. But what the readers may not perhaps have been able to conclude from the above remarks, as well as from those contained in the communication referred to, but which it is right to inform them of in this early part of the present article, is, that taking each in the *tout ensemble*, he thinks much more favourably of the doctrine than of the practice founded upon it. Our reasons for doubting of the extraordinary benefits of this method of practice having already been detailed at some length, we need only point out in this place the points of superiority of the doctrine. It serves to explain morbid phenomena in a much more intelligible manner than any preceding or cotemporary doctrines ; it teaches the necessity of applying physiology to the study of disease ; it has perfected the history of sympathetic phenomena ; it directs the attention to parts, which, though exercising a decided influence over every portion of the animal economy, in health and disease, have heretofore been too much overlooked ; it explains the manner in which the suffering of one organ excites suffering in other organs, and gives rise to what were formerly called general diseases ; it has greatly perfected our knowledge of the laws of irritation, and

the modifications of this morbid state as it appears in the various organs and tissues; it points out the propriety of referring diseases to organs, and has introduced in science a precision of language heretofore unknown. All these are signal services, which it would be vain to deny, and for which the medical science will be everlastingly indebted to M. Broussais.

It is plain that a doctrine which has been productive of such immense benefits to the science of pathology, is calculated to lead to a rational and successful practice, and that if it has not hitherto done so in the generality of diseases, the fault does not lie exclusively with it, but in a great measure with those who undertake to apply it to the treatment of disease. As regards the causes that have led to this result, we have already mentioned preconceived notions about the modus operandi of certain medicines; an unwillingness to admit any therapeutical facts, however well supported, which in the least contradict some of the fundamental principles of the doctrine. Were it necessary, other causes might be here enumerated; but we shall content ourselves with remarking, that an impartial observer cannot help recognising among these causes some *defects* in the doctrine itself; in some of its principles, which though presented as uncontrovertible, and as such are defended with all the warmth of which the physiological physicians are susceptible, are nevertheless far from being placed beyond the reach of criticism, and may therefore be well supposed to give rise occasionally to erroneous and dangerous practice.

Be this, however, as it may, at the time M. Broussais first proclaimed the necessity of reform to the medical world, the want of a doctrine was strongly felt in Paris, where for many years no genius had appeared to embody and systematize all the facts, both pathological and therapeutical, that had been collected during the whole of that interval. The truth of this would, we have no doubt, appear on a retrospect of the labours of the different great medical philosophers France has furnished. Alluding here only to the most prominent and influential among them, and making no reference to Barthez, who belongs to the school of Montpellier, and had but few partizans at Paris, we find that they never developed fairly a complete system of medicine, and that the assemblages of facts that were considered in that light were entirely forgotten at the time M. Broussais appeared. For example, the doctrine which Bordeu laid before the public in his different works was never completed or *syste-*

matized, if we may thus express ourselves. It had besides been only partially adopted at the time by the physicians of Paris, where, after graduating at Montpellier, he established his residence; and still less can it be said to have been adopted by the succeeding generation of physicians. The next prominent medical character that France, or rather Paris produced, was BICHAT. But, however disposed we may be to give this great man the fullest credit for the happy and extraordinary impulse he gave to the sciences of physiology and general anatomy, we must not conceal the fact that his works do not contain, as some have pretended, a full system of *national medicin*, but only excellent material, which by a skilful architect could be made use of with advantage in the construction of the desired edifice. There remains therefore only the *soi disant* doctrine of PINEL that can be regarded as exercising a wide extending influence at the commencement of M. BROUSSAIS' career as a medical reformer. This influence indeed appears to have been extraordinarily great over the mass of the profession. Time had only served to sanction it, and five or six editions of the *Nosographrie Philosophique* served as an evidence of the estimation in which its author was held, and of the deference that was paid to his views. But yet, notwithstanding this success, there were not wanting physicians who felt the inadequacy of the system, and who went so far as to doubt that PINEL could be fairly regarded as the founder of a doctrine. They were aware, that if from his labours we retrench his researches into mental aberrations—his beautiful descriptions of groups of symptoms—the introduction by him of a method of studying disease, more philosophical than any heretofore proposed, there would remain but little to entitle him to the praise of posterity. This we repeat was felt, but it is not less true, that none dared to attack this pretended doctrine, and far less seemed able to do it effectually until M. BROUSSAIS undertook the task.

We do not believe we can do better than by offering here a few lines from the work before us.

In speaking of the Examen, the author says: "Minds capable of projecting the re-edification of a science, and capable of executing it, are very seldom met with. Founded or unfounded, the systems they erect on the ruins of the others are not less the works of genius. It is a vast idea that of embracing at once so many and diversified systems, to examine them in succession, and judge of their legitimacy in a philosophical manner. M. BROUSSAIS is, I

believe, the only physician who has cast so hostile a look at the history of the science. It is in this way especially that he has operated so important a revolution. The astonishing disorder of the science, the vagueness and confusion of the reigning doctrines had doubtless long struck every intelligent mind. Consisting, as it did, in a mixture of Brownism, Humoralism and Hippocratism, the French doctrine had been but insufficiently constituted under PINEL. Every physician felt it; but none thought of fulfilling for medicine the task which the nineteenth century had done for natural philosophy, chemistry and the natural sciences. M. BROUSSAIS undertook, and it must be confessed has in part executed it. We cannot deny, that he has done for medicine what DESCARTES did for all the sciences. The medical edifice raised by the concurrent efforts of so many ages, such as he shews it to us, and such as it is in reality, is only a fabric raised without foundations. He shews, with great power of logic, the absurdity of the principal established dogmas, the radical defects of the medical language, the innumerable errors which its imperfections has occasioned and perpetuated."

When first promulgated, the physiological doctrine was received, as is somewhere confessed by M. BROUSSAIS himself, with extreme coldness; but after it was better known, and after the weight of PINEL's authority was somewhat broken, it excited a sort of enthusiasm among the younger members of the profession, and even among some of maturer years. It was not long indeed before it could enumerate a very large number of proselytes, principally among the physicians of the army and others who attended the lectures of M. BROUSSAIS, or read his work with care. This enthusiasm arose, as has justly been said, first, from the incontestible truths which the physiological doctrine proclaimed; and secondly, from its being comprehensive, and undertaking to explain every thing. Not a few, we have no doubt, were attracted by its simplicity and clearness, and by the hope, that the method of treatment founded upon it was easily learned and of universal application. Presented beside with an unsurpassed degree of talent, with ardour, and a dictatorial tone, the physiological doctrine soon enlisted some vehement partisans, who vied with their master in proclaiming the unexampled superiority it possessed over every other system of medicine; who went so far as to affirm, that in the hands of M. BROUSSAIS medicine had assumed a rank among the exact sciences, and thus contributed to ensure the general adoption of his views.

From all we have heard and read on the subject of the physiological doctrine, we are inclined to think, that it has lost within a few years a portion of its preponderance. Many of those who at first had adopted all its principles, have gradually found it necessary to abandon some altogether, and to modify others more or less materially. While recognising the necessity of being governed by principles, and paying a just tribute of praise to M. Broussais for the services he has rendered science, the rising generation of physicians in France do not seem inclined to concede to this reformer the degree of importance and utility—the immense superiority he claims for his doctrine; and far less to regard the basis of pathological science as laid down by him as imperishable and incapable of improvement. This temperate opposition, indicative as it is of an independent spirit of investigation, must be allowed to be laudable; for the history of medicine and our knowledge of the human mind will serve to shew and remind us, that doctrines at first thought infallible, have been found defective in many points by subsequent investigators, and that the works of man can never be regarded as faultless and complete. But opposition is carried farther. It is not unfrequent to find some among all classes of physicians, and even among students, discard this doctrine with disdain as ridiculous, unfounded and dangerous.

This unqualified censure experienced by the physiological doctrine, would not astonish us were it always found to originate in old members of the profession, for these are generally disposed to oppose every new view of a science they have cultivated for many years; views which, if admitted, would upset more or less completely those they had formerly been taught to regard as the most rational, and which time had implanted deeply in their minds. Still less would it appear astonishing in professors whose opinions have been publicly expressed, and who think their honour interested in upholding these and censuring all others in the least at variance with them. This is natural enough, for nothing is more difficult than to convince a man of the necessity of unlearning what he knows, of abandoning favourite opinions and recommencing his studies. But a young man experiences no such difficulty; he has nothing to unlearn, since he is yet a student. If he be not, the views he has adopted are not his own, and consequently he cannot feel for them that affection which their author naturally experiences in their favour. If, therefore, the young members of the profession refuse to admit as correct the principles of

the new doctrine, the cause must be the influence, on their minds, of the older members of the profession—of their teachers and friends, who have their private reasons for opposing the doctrine. At any rate the opposition is not creditable to either, for it indicates in those *influencing* the operation of selfish motives over the conviction of reason, and in the *influenced* a disposition to allow their judgments to yield to the decisions of others without giving to the subject the degree of attention it deserves. It may perhaps appear astonishing that we should speak in this way; but we do so without any hesitation, firmly persuaded, as we are, of the justness of our remarks. However founded the accusation brought against M. Broussais and his school may be of having extended their pathological views too far, however ready we may be to admit that many of the principles of their doctrine, which have been offered by them as incontestible, are far from having been sufficiently substantiated,—however just may be the remark, that the full application of this doctrine to practice has not always proved as happy as its founder and warm adherents have pretended, it does not appear less positive to us, we repeat, that the physiological doctrine is the best, most rational, most useful of all those hitherto offered to us, and that most of its fundamental principles will be transmitted to posterity to form the basis of a correct pathological doctrine. Entertaining this opinion we cannot help thinking, that the individuals, to whom we have just now alluded, by such an indiscriminate censure, lay themselves open to the charges of illiberality, of selfishness, or servility to the opinions of others.

The value of this doctrine may, we believe, be estimated by the influence it has exercised and continues to exercise on the science of medicine in France. It is impossible to read the medical works that have appeared in that country within the last ten or twelve years without being struck with this influence. Even in the writings of those who hold themselves up as the decided opponents of the doctrine, it peeps out, and cannot be mistaken; for these hold language very different from that held by preceding writers on pathological and therapeutical subjects. They have learnt to appreciate the importance of the gastro-intestinal mucous surface in a state of health and disease; to recognize the existence of gastric irritation and its influence in the production of other irritations, and other points which it would be useless to enumerate here. The whole of this is no where found in the medical writings that appeared before the

publication of the treatise on chronic inflammation and of the *Examens.* By some who admit this revolution in medical views and medical language, the credit for it is not given to Broussais. They maintain that, arising as it did from the impulse given to the science by Pinel and Bichat, it would probably have been effected had Broussais never appeared. Agreeing that such *might* have been the case, no one can be positively assured, that it *would* have been so, and it cannot be denied, that to M. Broussais much of what has been effected should in justice be referred—that the science before his appearance remained, as it were, dormant, and that it was only after he had commenced his investigations, led the way in pathological inquiries, indicated the proper method of conducting these inquiries, and pointed out the necessity of referring symptoms to organs or tissues and of basing pathology on physiology, that medicine can be said to have been properly studied and to have made undeniable progress. Nor can we without injustice refuse to admit, that M. Broussais has contributed to improve the practice of medicine, we do not say every where, but at least in France. Before him there was still lurking in that country a little disposition to favour the method of Brown. But eleven years before the publication of his *Examen*, the elements of medicine of the Scotch reformer had received the honour of a translation and had been offered up as a treasure. Weikard's Commentaries had also been translated and widely circulated, and a short period before the appearance of the work above mentioned a Dr Hernandez, who from his high situation in the medical staff of the navy may be supposed to have possessed considerable influence, had published a work on typhus, in which the doctrine and practice of Brown were defended and even extended with great warmth and ingenuity. Nor is it less certain, that Mr. Pinel himself, the chief at the time of French medicine, had not divested himself of the fear of debility and fondness for stimulants. Even M. Broussais in his Treatise on Inflammation showed, that he was himself tinctured in no small degree with the errors of the Brunonian doctrines, and spoke in a way calculated to prove, that his opinions were not peculiar to himself, but the result of the instruction he had received. This tendency to follow the method of Brown was in a few years destroyed nearly completely, and no one can refuse to admit, that this happy change has been effected principally, perhaps solely, through M. Broussais. M. Pinel and his school had, as we have already shown, inculcated the

propriety, except in certain cases where symptoms of inflammation were very apparent, or where those of adynamia were predominant, to rely on the Hippocratic expectation, and with a few physicians the doctrines of humoralism and the practice founded upon these were still regarded in a favourable light, and the latter continued to be pursued. If we examine what is now done in France we shall find that, though active antiphilogistic means are in many cases applied with too sparing a hand, yet still diseases are treated much more energetically, that less is left to the efforts of nature; in a word, we shall find there a much smaller number of water gruel practitioners, as they have been called, than existed fifteen years ago—while the inutility and danger of a frequent employment of emetics and cathartics have been felt and acted upon. To what are the French principally indebted for these improvements in practice if not to the writings, lectures and example of M. Broussais and his followers? Where shall we find in works antecedent to his own publications any indication of reform in practice? If since that period we find an author speak rationally on theory or practice we may be sure to find the views of M. Broussais pervading the whole, however silent such an author may be relatively to this great man, unless to combat, as is now fashionable, some particular points of his doctrine.

In a preceding part of this article we mentioned a few of the causes that have probably occasioned a change of sentiment in the minds of such physicians as had at first adopted, with more or less restriction, the physiological doctrine, and led not only to a cessation of the enthusiasm it at one time excited, but also to the decided and indiscriminate censure it encounters from many. Other causes may now be mentioned. 1. Fickleness and a desire for change. Every one who has the least knowledge of the French character, must be aware that among no people in the world are new views more eagerly adopted, but also more easily cast aside and forgotten. This fickleness does not prevail only in medicine, but in every thing, (save affections, for we must acknowledge that these are as strong and as lasting among the French as any where else, the opinion of many to the contrary notwithstanding,) and those who know them well are only astonished, that some new doctrine has not yet completely effaced the physiological one from their memory. Nor is it improbable, that this would have taken place were it not for the fact, that it is in a great part founded on truth,

and that men of M. Broussais' strength, and who are capable of observing, creating and defending as well as he, are not frequently to be found. 2. Many are influenced in their opinion of men and things by what are called *Coteries*. When a young man becomes familiarly acquainted with several members of these parties, and continually hears from them, that a doctrine or author is ridiculously absurd and extravagant, he often unconsciously finishes by believing so; although he may at first have been inclined to look for himself and would probably have judged differently. Some of the medical journals of France, edited by men violently opposed to the physiological doctrine, have contributed, in no small degree, in putting a stop in many to the enthusiasm it created. These editors fill their pages with violent declamations against the principles and details of the doctrine, and do not spare the author. It is very evident to every enlightened and unprejudiced mind, that this furious and indiscriminate opposition betrays the private motives of those by whom it is made. But to those who confine their readings to such journals, it must sooner or later appear, that such an opposition is well founded, and that the doctrine in question has not the least claim to their serious attention. 3. But fickleness of character, stubborn attachment to former opinions, influence of professors and favourite authors, already noticed, will not always suffice to account for this opposition; for some of the most clamorous have no opinion of their own to defend, and yet do not appear disposed to bow implicitly to the views of others. In some of these the decided opposition seems to arise from a desire to make a noise, and be considered as the chief of a sect, while in some others we must attribute it principally to a defect, a narrowness in the intellectual powers, in consequence of which the subjects they wish to investigate are seized usually in an improper point of view, and conclusions are drawn from insufficient premises. Paris, like all other cities, contains many minds of this sort, who unfortunately possess an immeasurable degree of ambition, and are afflicted with the mania of authorship, and who having perceived in the physiological doctrine some weak and assailable points, are blind to its much more numerous beauties, and conclude that the whole is censurable.

The attacks against the doctrine in question which daily issue from the offices of these aspirants to renown, contain often not one word of reason or argument, but produce sometimes, from the warmth and the tone of conviction with which they are written, the effect desired.

4. The extension to which M. Broussais has carried his doctrine —the forced explanation to which he has recourse in many instances, the great quantity of theory which he represents as uncontrovertible truths, and particularly his exclusive therapeutical views and application of his doctrine to practice, have appeared to many censurable and ridiculous. A *reaction* in consequence has taken place in their opinions, commencing at first by a temperate refusal to subscribe to many of the principles both pathological and therapeutical of the doctrine, but ending, in consequence of stubborn defence of these same principles, in a positive condemnation of the whole. In this there is nothing to astonish, for we all know that in France a man passes readily from one extreme to another. 5. An additional reason may be found in the violence of M. Broussais's attacks—in the unceremonious manner with which he has treated many existing and venerated characters. Pinel, Laennec, and in fact all whose views he undertook to oppose, were lashed with an unsparing hand. It is natural, therefore, that they and their friends should have been incensed against the author of such virulent phillipics as may be found in the *Examen* and the *Annales*, and that the anger thus created should have operated against the doctrine which the offender was endeavouring to establish. To wound men's pride is not a very sure way of opening their minds to principles which one is attempting to inculcate; far less is it a proper way of convincing them they have been erring, and should unlearn what they know and have been teaching for many years past. And yet this is exactly what M. Broussais has done even from the commencement, when he had not, as perhaps he has at present, the excuse of retaliation.

Such are the principal causes that have contributed to diminish the number of exclusive adherents to the physiological doctrine, and augment the opposition it encountered from the commencement. It must not be imagined, however, that this doctrine is no longer, as some are in the habit of asserting, the subject of serious thought in France. So far from this, we may class among the disciples of M. Broussais several writers and physicians of considerable merit, who have modified, it is true, several points of his system, but retain the great majority of his principles. The number of its less authoritative friends is more than respectable, and, as we have seen, its influence is even felt among those who are most clamorous in their opposition to it. This applies more particularly

to Paris. In the provinces opinions are also divided; for while the doctrine is warmly assailed by some, it is as warmly defended by others. But although the number of opponents may perhaps be said to be greater there than that of disciples, yet it is probable that the weight of talent is decidedly in its favour. At Montpellier, Lyons, Avignon, Marseilles, Toulon, Bordeaux, Beaucaire, &c. the most eminent and rising men have adopted it with greater or less restrictions, while the opposition is made principally by routine practitioners and the disciples and friends of the opponents of the capital. Nor should we forget to mention, that among the medical officers of the army and navy it counts many zealous advocates.

It is not in France alone that the physiological doctrine can enumerate warm supporters, for we could without difficulty show, that in almost every city of Italy, Switzerland and the British isles, as well as some parts of Germany, it has worked its way and has been adopted by some fully, by others only in part; and we all know, that in our own country it has been adopted and is warmly supported by several physicians of considerable abilities.

A question of some interest here presents itself,—What is the probable doom of the physiological doctrine? Is it likely to live much longer, or is it soon to share the fate of every preceding doctrine and make way for some new and more fortunate one? The history of medicine is there to shew, that since the days of Hippocrates doctrines have succeeded each other with more or less rapidity; that although embraced and defended for a time with enthusiasm, they have yielded with the progress of science, and are now forgotten or only considered as fit subjects of curiosity. The events of the last ten years, and the known tendency of the human mind to improve every branch of knowledge, leads us to think, that the physiological doctrine will finally share in great measure the fate of its predecessors—that many of its dogmas will be more or less modified—others completely overturned. But so firmly persuaded are we of the correctness of the mass of its principles, that we fear not to predict they will be considered as such in after ages, and will serve to transmit the name of the author even to the latest posterity.

Whoever has read the works and heard the lectures of M. Broussais, and is acquainted with him, must be ready to admit, that few men were better calculated to fulfil the arduous task he undertook—of revolutionizing the science of medicine. Nature has endowed him with decision and energy of character—a great degree of perse-

verance—a quick and active mind; while study and a wide experience acquired in many diversified climates had furnished him with scientific resources. But if he possessed all these advantages and wielded them with full effect, we ought not to conceal, that he has erred much as regards the manner in which he conducted his attack and developed his particular views. There was no necessity of being always, as M. Begin has remarked, in a passion, and treating every one as his personal enemies, whose only crimes were to have praised him less than he deserved or thought himself entitled to, and "to have placed themselves, without waiting for him or his consent, in the first ranks of renown and authority." The style of his criticism on M. Pinel is particularly censurable. He seemed to direct his shafts less against the doctrine than against the man to whom nevertheless he owed gratitude for being one of the first to notice with praise his "Phlegmasies Chroniques," and who by his age, long standing in the profession and rank in society, was entitled to respect.

Let us now examine M. Broussais's claims as a man of science, a writer, a lecturer and a physician.

Few persons acquainted with the existing medical authorities of France, either personally or by their writings, will refuse to admit, that there are none of equal strength with M. Broussais as a pathologist. His superiority, indeed, as a medical philosopher cannot for a moment be questioned. Some persons in France may perhaps feel disposed to cite one or two whom they regard as his equals, if not more; but as we ought always to judge men by what they have done, we have not the least hesitation in giving the decided preference to M. Broussais, as his deeds speak loudly for themselves—as he has given proofs of independence and originality of conception and power of execution; while in favour of the others nothing of the sort can be pointed out, and it is yet to be shown that they would be what they now are had not M. Broussais existed. Some individuals have at a time offered Laennec as a fit champion to oppose M. Broussais. But it requires no great power of discrimination to perceive, that these two individuals cannot be placed on a parallel with each other. A perusal of their works will serve to convince every one of the truth of this. In Laennec we discover an immensity of minute and we allow useful details; but beyond this it would be vain to expect any thing. The moment he attempts to generalize—to draw inferences from the facts he has

detailed—the feebleness of his powers become apparent. In M Broussais, on the contrary, we observe all the attributes of a powerful genius, vast, luminous, *immense* conceptions;—a force of concentrativeness seldom equalled by any one. If he has erred, it has been from excess of genius, his mind sometimes carrying him quicker and farther than he is justified by his premises. In a word, M. Laennec cannot be remembered by posterity except for his anatomical researches and his *stethoscope*, while M. Broussais's name will be handed down to the latest ages together with those of a Galen, a Stalh, a Boerhave, as one of the reformers and benefactors of the medical science. But even allowing, for the sake of argument, that Laennec was his equal, he is now dead, and M. Broussais would not the less remain master of the field. We would even go farther and say, that if justice were rendered him, we are not sure that he ought not to be pronounced the first medical character of the age.

But if M. Broussais is distinguishable by an unusual degree of natural abilities, it is not to be denied that he is far inferior to some of his immediate predecessors and of his contemporaries as a *savant* and a writer. Yet while admitting that in his different works he does not evince much learning, and even as much reading as might be desired in a reformer—in one who holds so conspicuous a rank among the physicians of the age—while admitting that he proves occasionally he is not on the *niveau* of others relatively to the accessory branches, we must do him the justice to say, that he is far from being as illiterate as some pretend. There are few physicians who, having spent the greater portion of their lives in camps, and have since devoted themselves to pathology and practice, would not prove less so than he. As regards M. Broussais's claims as a writer, every one must admit that they are slender.

It would be difficult, indeed, to find a style more incorrect, harsh and *quere* than his, but which at the same time is more rich and energetic. It is these last qualities joined to the originalities of views his works generally contain that make these so attractive. Untrained from an early period of life to scientific and literary pursuits, his mind has become as it were restless; his thoughts dwell in a desultory manner on the various parts of the science he wishes to investigate, and he experiences some difficulty in concentrating them exclusively on one subject, in examining this subject in all its bearings, and giving to his researches that systematic order so absolutely

necessary in methodical works. Hence the few attempts he has made in that kind of composition have in great measure failed—not in the matter but in the manner. They all contain flashes of genius —original thoughts, and were it possible to judge of such works by the merits of particular parts or chapters, without reference to the whole, we would pronounce them often admirable, while the *tout ensemble* produces often, from the disjointedness of the different members, an unfavourable impression. Examine, on the contrary, his polemic writings and you will there perceive evidences of extraordinary powers, and be ready to admit that this style of composition is that in which M. Broussais has evinced most talent. This judgment on M. Broussais's merit as a writer may perhaps appear extraordinary to those who remember that the physiological doctrine, so complete, so simple and so luminous, has emanated from his mind. But we cannot discover any inconsistency between what we have said and the admission that this doctrine forms a tout ensemble of no ordinary value. To form this there was required genius, experience, power of observation and of drawing deductions from facts ; time to arrange the different members of a whole, and surely the incapacity of writing a systematic work, even to develope clearly the whole or only a part of this doctrine, is not incompatible with the above qualifications.

M. Broussais formerly delivered private courses of lectures on physiology and pathology ; but latterly he has restricted himself to the duties of his chair of pathology in the school of the Val de Grace, to which students in general are admitted. In conjunction with some of his countrymen the writer of this article occasionally attended these lectures, and was not a little struck with them. The introductory, which was delivered on the 5th of November last, appeared worthy of being noticed here. On this occasion the professor entertained his auditory, which was composed of about fifty students, most of whom were we believe pupils of the hospital, with the history of pathology from the days of Hippocrates to the *birth* of the physiological doctrine. He next pointed out the necessity of theory, and in doing this showed, that even the imperical sects had, some knowingly, others unconsciously, theorised. He indicated the vagueness of preceding doctrines, and the little use they had been to the practice of medicine. At the same time, as may readily be supposed, he did not forget to point out the superiority of his own doctrine, and the advantages that resulted from its application to

practice. After paying some compliments to the physiological school for the efforts they had made to overthrow the erroneous views entertained in the preceding age, and to establish the basis of a doctrine so pregnant with advantages, he remarked that it was the lot of weak minds to follow with a blind routine the current of received opinions; and that there were only persons endowed with powerful intellects who could open a new path for themselves and strike out new truths. The *modesty* of these remarks did not escape the attention of some critics, and was noticed in some of the journals of the week.

His manner of lecturing is very far from being agreeable. He occasionally reads from copious notes before him, but often lectures extempore. On these occasions he hesitates, repeats the same words, the same phrases over and over again, and in general makes use of very unpolished language. He does not spare his opponents, and levels at them the most vehement phillipics. During this, his face, head and hands are continually in motion, and he often grins most awfully. One cannot help being struck, however, with the expression of his countenance. It is all life and animation, and bespeaks a man of strong and brilliant mind.

We have already hinted at M. Broussais's modesty, and might have derived many facts in exemplification of it from his lectures; but we prefer selecting some from a different source. M. Broussais has been warmly censured for publishing so frequently in the *Annales* his own praise, either through the medium of anonymous articles, or of some signed by his friends. As he is the sole avowed editor of that journal, and as such must be supposed aware of the nature of the articles inserted in it, it is but fair that, allowing, as he does, such complimentary articles to be published, he should be accused of sounding his own praise. We are willing to admit that M. Broussais is not really the author of the anonymous articles in question; but until it is positively demonstrated that they are written by some one else, it will be difficult for him to prevent the generality of readers from saddling them on his shoulders. The excuse given sometimes, that they are published without his knowledge, is but a weak one, and will not, true as the fact may be, prove satisfactory to every one, and shield him from the accusation of inordinate vanity; for there will always be found many who will feel disposed to say "an editor ought to know what is about being published in his journal, and is alone responsible for it." All this

praise of the founder of the physiological doctrine has done much injury to M. Broussais, and to his doctrine itself; for as none of the journals of the capital or of the provinces appear inclined to echo it, his opponents sneeringly remark that *he* is his only admirer, and that a doctrine emanating from a man who can find no one to sing his praise but himself, cannot, independently of other reasons, be considered as entitled to much attention. Jokes are continually cut on the subject, and we all know that jokes in France are worth arguments.

As a practitioner M. Broussais is no less worthy of attention. It has on a former occasion been remarked, that he should be considered less exclusive, less a Broussaian than some of his pupils. Some of the best informed among the physicians of Paris itself, even among those who openly oppose his doctrine, make no scruple to avow that they consider M. Broussais as a very excellent practitioner, in whose hands they would willingly trust themselves in case of sickness. There are not wanting others, however, who affirm, and our author repeats the affirmation, that M. Broussais has been a great practitioner, but that they doubt he should be considered in that light now, as he is much more exclusive in his views than he was formerly. As the writer of this article cannot judge of M. Broussais's former method of practice otherwise than by his writings, he will not take upon himself to decide on this question: all he will say is, that he thinks very highly of him as a practitioner now. Some of our acquaintances who occasionally visited the Val de Grace, censured M. Broussais for allowing some of his patients to *get* well, and for not employing means which in their opinion would have been likely to *cure* them. This censure arises from the peculiar practical creed of these gentlemen, and is no evidence of a defect in the plan pursued by M. Broussais; for there is a wide difference between condemning a thing, and proving that this condemnation is well founded, and on the present occasion those who censure M. Broussais ought, before they can establish such a defect, to demonstrate that the plan they prefer would have been more advantageous. For our own part, we are yet to be shown, that the *expectation* which is thus so decidedly censured is not preferable, under many circumstances, to the method which it is thought M. Broussais *ought* to substitute to it. No fault is attached to him for his treatment of the first stage, as he is then very energetic, and draws blood from the arm, and by means of leeches, to even a large amount. If he resorts to an expectant method, it is only

after the state of super-excitement is over. Under these circumstances he generally waits, in order that, by the recuperative powers of the economy, the remains of the irritation has disappeared; and to aid this he prescribes demolients in all shapes. We have no doubt, as was already said, that in such cases he might often derive benefit from more active internal and external means; but we are not the less disposed to think, that as a general rule the expectant plan is preferable, and certainly is always more agreeable to the patient. It is said also that in chronic diseases he does little or nothing. This is partly true; for he does not, like some practitioners, use energetic remedies and search after specific means, which for the most part are taken from the class of active agents; but he pays particular regard to the necessity of removing the chronic irritation by means of low diet and soothing remedies. He even draws blood locally, or generally, if the strength of the patient will allow; but aware that a chronic inflammation, on which he regards most, if not all, chronic diseases to depend, is not to be cured rapidly, and that it would be wasting the life remaining in the patient to draw blood frequently and in large quantities, he is very abstemious in respect to the use of this means; unlike some of his disciples who, having less experience and practical tact than he possesses, have done much harm by the use of leeches in this class of maladies. Our American friends who feel disposed to join in this censure of M. Broussais's practice in chronic disease, on account of its inertness, should bear in mind, that a distinguished practitioner of Philadelphia, who has gained a high and deserved renown in the treatment of this class of disease, has succeeded in them principally by the very low diet he prescribes; for he generally resorts to few remedies, and these of the less active kind, and in small doses. M. Broussais's medical tact is admitted by all who have noticed it to be remarkably fine. We cannot better express our opinion on this subject than by repeating what was once said to us by a Piedmontese physician, who is a great enthusiast on the subject of animal magnetism. He compared M. Broussais, while at the bed side of a patient, to a lucid somnambulist during the magnetic sleep, stating that M. Broussais saw as quickly, and with his eyes open, what was going on in the body of his patient—could establish his diagnosis and prognosis with as much certainty as he could be expected to do were he a somnambulist, and endowed with power of divination, which that physician was firmly persuaded some could possess.

As may readily be perceived from what we have said of M. Broussais's modesty, this gentleman is fond of occupying the attention of the medical public. In that respect, indeed, he must have cause to be satisfied, for it may be doubted whether any medical man has been more the subject of conversation, or of writing, during his life time, or has been more lauded for services rendered to science. But M. Broussais differs in some respects from other men, and on the subject of praise appears very difficult to be contented. He cannot bear the least contradiction; every criticism of his pathological views, however moderate and decorously conducted, is received by him as an insult to common sense, and almost as a personal offence. Every compliment, on the other hand, is received as a due, and without the least appearance of gratitude. To this let our readers add, that M. Broussais is naturally rough in his manner—that this roughness sometimes amounts to rudeness, that he defends his opinions with violence, and endeavours to subdue by force when he cannot do it by the power of reasoning—that he feels and even exaggerates his superiority, and thinks himself entitled to exercise a complete intellectual despotism; and they may form a tolerable idea of this individual.

Article IV.—*Reflections on the Treatment of Fractures of the Lower Extremity, and a Description of a New Apparatus—with Cases. By* J. Amesbury, *Member of the Royal College of Surgeons. London*, 1822.

Observations on the Nature and Treatment of Fractures of the Upper Third of the Thigh Bone, and of Fractures of Long Standing; illustrated by Cases obtained from Public and Private Practice. Second Edition, with an Appendix. By J. Amesbury, *Consulting Surgeon to the Royal Union Association; Surgeon to the South London Dispensary; Lecturer on Surgery, &c.* 8vo. *Pp.* 320. *London*, 1829.

American surgery has been greatly benefited by the impartiality of its cultivators, who have usually adopted, without hesitation, any valuable suggestion from whatsoever source derived. The mutual

prejudices and jealousies of European surgeons have no doubt seriously retarded the advancement of science in their respective countries; the English refusing to adopt the suggestions of the French, while the latter despise every thing emanating from beyond the channel. We believe that the principles and treatment of fractures as established by the French have hitherto deserved, and of course have received from us, the preference, especially as regards these accidents affecting the lower extremities. We are not however by any means prepared for the assertion that nothing more is desirable; on the contrary, there are many inconveniences and imperfections necessarily connected with the most improved apparatus, when applied by the most judicious and scientific surgeon, and even many indications which are but partially, if at all, fulfilled. The simple fact that so few surgeons prefer the same apparatus in any given fracture is confirmatory of our observations, and few persons have had the management of severe fractures of the lower extremities without experiencing some defect in the mechanical means at his command. Surgeons are by no means agreed even as to a suitable position; and it is well known that the schools of England and France are decidedly opposed to each other on this subject. We have always believed with the former, that the flexed position is the most natural; that when adopted there is less uneasiness produced, coaptation is more readily effected, less irritation is excited, and of course there is less disposition in the muscles to contract and less danger of displacement, so far as mere position is concerned. But in practice we have been advocates for the straight position, because the machinery proposed by Dessault, Boyer, Physick and others has more than counterbalanced in our opinion the advantages derived from the flexed position. The English practitioners have, we should say, hitherto failed in adapting any suitable measures for treating fractures of the thigh bone in the flexed position, so as to prevent deformity and lameness, while the French and Americans have very generally succeeded, when proper attention has been exercised, in rendering even the straight position effectual for these objects. Believing these observations correct, we have been always favourable to any proposition which would allow of the flexed position in fractures of the lower extremities, and at the same time fulfil the other essential indications for the successful treatment of these accidents. Mr Amesbury has proposed to solve this difficulty, and in a series of publications has adduced numerous facts and

arguments, evincive of much mechanical ingenuity and great scientific knowledge, in proof that all the essential indications for these fractures can be fulfilled by machinery adapted to the flexed position, with more efficiency, and at the same time with more comfort to the patient, than by any other measure hitherto proposed. We are by no means prepared to say that this proposition has been fully demonstrated, but more than enough has been adduced to secure for Mr AMESBURY a character as a scientific surgeon, and to render his principles and treatment deserving of serious examination and judicious experiment, and we can have little respect for those who will publicly condemn, without adequate trial, his machinery as altogether absurd and useless. Such condemnation, we regret to acknowledge, has been awarded to the original apparatus of Mr AMESBURY by some leading surgeons in our country; whether this has resulted from jealousy, or from any other unworthy motive, we cannot decide. Neither are we ourselves prepared to recommend this new apparatus as decidedly preferable to our original and valuable measures; but we must acknowledge, that our impressions from what we have heard and read of the principles and practice of our author are exceedingly favourable. When they have been adopted in our country, the result has been generally successful, and the comfort of the patient has been increased. Mr AMESBURY has, if we may credit his own positive statement of facts, not only succeeded in the cases of recent fracture for which his machine was originally designed, but has most effectually extended its use to fractures of long standing, "artificial joints," as they are here usually denominated; and moreover, guided by the same principles, he has invented an apparatus for fractures of the upper third of the os femoris, of course including the cervix within and without the capsule, the application of which has been far more successful than any hitherto proposed. If to these statements we add that Mr AMESBURY has received the patronage of such men as Mr KEY, Mr GREEN, Mr TRAVERS and Sir ASTLEY COOPER, who have all recommended patients to his attention, patients too whom they had despaired of effectually relieving, we must concede that his measures fully deserve the attention of surgeons, and that injustice would be done to the cause of humanity if they should be any longer neglected. Influenced by these opinions we shall present a summary of Mr AMESBURY's principles and a description of his apparatus, which, assisted by the accompanying engravings, will, we trust,

confer sufficient information to enable any one to imitate his practice.

Bones, it is now well known, are, like the soft parts, capable of inflammation, and of course their solutions of continuity are remedied by the deposition of lymph or of granulations. Hence, the essential indications in the treatment of wounds of the soft parts, or of fractures of bones, must be the same; coaptation and rest are necessary for the reunion of divided parts. To apply these principles to the management of fractures, especially in the lower extremities, has always been a difficult task, as the causes of displacement from the original force applied, from the weight of the limb, and especially from the contraction of muscles, are exceedingly efficacious. These causes therefore should be completely counteracted by the apparatus employed, and a preference certainly should be awarded to those means which will be most conducive to the comfort of the patient, and best resist the tendency to displacement, even should such means be apparently somewhat complicated. "Simplicity," says Mr Amesbury, "as applied to a piece of machinery, signifies that which answers the same intentions by the fewest means;" and no one would prefer an instrument which did not answer the purpose proposed merely because its construction was simple. If Mr Amesbury's apparatus be considered complicated, it may nevertheless be simple agreeably to the above definition, inasmuch as it proposes to fulfil more indications than any hitherto recommended. Let us examine then our author's principles and indications.

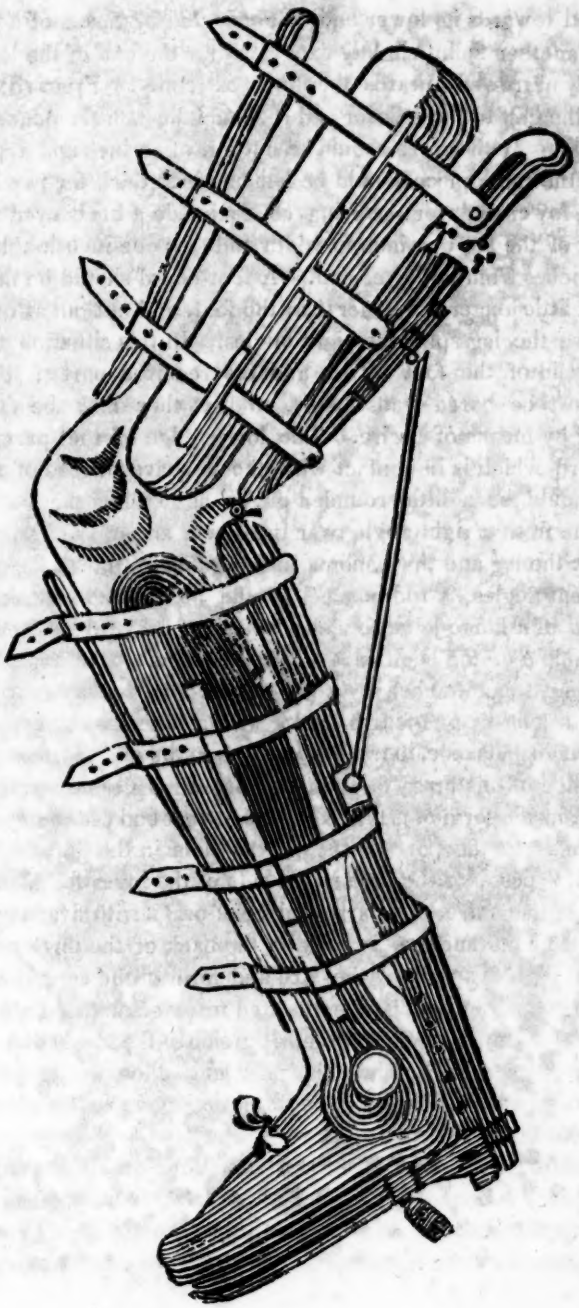
"If we consider the motions of the limb in the natural state, we shall find that the leg is passive to the motions of the foot, the thigh to the motions of the leg, and the pelvis to the motions of the thigh; hence we should infer, that if the foot and thigh were fixed by a continuity of splint, the leg must of necessity be fixed also; and if the foot and pelvis could be fixed so that no motion could take place in the one without passing over to the other, the thigh also would become a fixture."

In fractures of the leg, if the foot and thigh be fixed by a continuity of splint, no motion can occur at the cavity of the fracture; and in fractures of the thigh, if the whole limb be fixed to the hip joint, and the fracture be not so high up as to prevent the splints from holding the upper fragment firmly, the patient may direct its motions upon a plane, and therefore can make it follow the motions of the pelvis, and consequently, has it in his power to avoid the displacement which might otherwise ensue.

"But if the pelvis could be fixed upon the thigh by a continuity of the same means that fix the foot and leg, motion given to either end of the limb would be still less likely to affect the fractured parts. Supposing the limb, with the thigh bone fractured, and put up as the last experiment would indicate, (that is, so as to fix the pelvis also), motion given to the foot would not have its centre in the hip joint, but would pass over it to the pelvis; and if given to the pelvis, it would not be felt in the site of the fracture, but would be propagated along the splints to the foot, which however would not feel it but in common with the leg and thigh; and as far as regards the motion given to the limb from external causes, this would be the case whether there exist between the pelvis and the foot one fracture or a dozen."—"In the construction of any machine for fractures of the lower extremity, the following indications should be borne in mind: 1. It should fix the whole limb, so as to admit of no motion whose centre is not in the hip joint, or between the pelvis and the back. 2. It should maintain the fractured ends in a natural position, and in perfect coaptation. 3. It should lie on the limb with ease to the patient. 4. It should enable the surgeon to place the limb at any angle the case may require. 5. It should allow of the application of extension and counter-extension when the limb is in the bent position. 6. It should be entirely passive to the motions of the limb, and should allow the patient to place it in any position most congenial to his feelings. 7. It should enable the attendants to move the patient from place to place without any danger of displacing the fractured ends. 8. It should allow of being adapted to limbs of different lengths and sizes. 9. It should be applicable to fractures in any part of the limb, and of all kinds, whether simple, comminated or compound. 10. It should be simple and easy of application. 11. It should ensure to the patient a speedy recovery and a straight and perfect limb."

This may be considered as an enumeration of the advantages to be derived, in Mr Amesbury's opinion, from his original apparatus, whenever the fracture is below the superior third of the os femoris. If experience should confirm these views, no one can hesitate to award the meed of superiority to the machine of Mr Amesbury. *Experientia docebit.*

We present an engraving and a condensed description of Mr Amesbury's instrument, and would merely observe that if the construction appear complicated, its application is simple and easy. Mr Amesbury has all his splints constructed of beech-wood. To fix the limb, and allow it to be bent at different angles, a splint, slightly hollowed out for the back of the thigh, gently curved so as to answer to the natural curvature of the thigh bone, and gradually



narrowed towards its lower end, is connected by means of a hinge-joint to another splint slightly excavated for the calf of the leg, and gradually narrowed towards the lower extremity. From the situation of the calf to the inferior end it should be a little concave, to fix the pad. Both pieces should be cut out of an inch and a quarter board; the thigh piece should be left one inch thick for two inches from its lower end, for receiving on each side a brass eyed screw, and that of the leg one inch in width and also one inch in thickness for six inches from its lower end. A foot board should be made of a piece a little longer and wider than the foot, and cut out at one end to receive the leg splint at right angles. In this situation the receiving end of the foot board and the received part of the leg piece must be bored transversely, so that they may be fastened together by means of a wire. The lower edge of that part of the foot board which is in contact with the concave surface of the leg piece should be a little rounded off, so as to allow the foot board to decline from a right angle over the lower end of the leg splint.

To fix the leg and thigh splints, and to allow of their being placed at different angles, a rod of steel should be connected at one end, by means of a hinge-joint, to a short pillar of brass, fixed by screws to the middle of the back part of the leg piece. The other end of the rod must be attached by a hinge-joint to a brass foot, an inch and a half long by one-fourth thick, with a hole in its centre, and another hole in its side, to traverse the one in the centre transversely. To the side of this brass foot must be affixed a piece of brass with a spring, in the form of a flute key, and at that end of the key which corresponds to the part that stops the hole in the flute is fixed a steel pin, to pass into the hole in the side of the brass foot and cross the hole in its centre. A narrow piece of brass, with five stays projecting from its surface, is fixed to the back of the thigh portion. Each of these stays is of the size and form of the central hole of the brass foot, and each is perforated transversely, so as to admit the pin made to traverse the hole in the side of the brass foot. The stays are to be placed at such distances as to allow the leg and thigh pieces to be fixed either in a straight direction, at right angles, or at any obtuse angle.

To adapt this instrument to limbs of different length, as far as the leg piece is concerned, a number of holes should be bored in a transverse direction, at its lower end, and then the wire which fixes the foot board to the leg piece being drawn out, the former can be

moved higher or lower and fixed wherever necessary. The thigh piece may be lengthened by means of a thin plate of brass the width of the splint and five or six inches long. When hammered out to lie upon the hollow of the thigh piece, and turned off at its upper extremity, this plate has attached to it two thin plates or bars of steel of its own length and about half an inch wide. As much of one end of each of the steel plates as is equal to the thickness of the wood of the thigh piece is bent at right angles. The steel plates are then to be placed upon the back of the brass plate in a longitudinal direction, (parallel with it but not in contact), and the bent extremities united to it just below its upper end and within half an inch of its sides. The brass plate is now to be placed in front of the thigh piece, and the steel plates behind it, and they must be united through two long mortises in the wood in such a manner as to allow the brass plate to be moved up and down, or to be fixed to the wood, at pleasure. To answer this purpose two male screws are fixed to the lower end of the brass, opposite the steel plates, and made to pass through the mortises in the wood and two corresponding mortises in the steel plates, to which they are fixed by female thumb-screws. When these female screws are loosened, the brass plate may be made to slide on the wood, so as to accommodate the length of the instrument to that of the thigh. That the instrument may be adapted to different degrees of thickness in the calf of the leg, or to the length of the heel, a leather shoe, open from the toe, with a wooden sole, should be suspended from the top of the foot board by means of a strap and buckle. The strap should be fastened to the bottom of the wooden sole in a groove, and made to pass over the top of the foot board and be screwed to a buckle near its other extremity. The strap should be let a little into the top of the foot board, that it may not change its situation. The sole of the shoe should be confined closely to the foot board by a strap and buckle passed round them, or by making the sole of the shoe to slide in a groove in the foot board, upon which it may be fastened by a thumb-screw. The leather of the shoe is to be confined upon the instep with straps or ribbons. The shoe answers three indications: to raise or lower the heel as may be necessary; to prevent any lateral or rotatory motion of the fragments; and to form an easy bed for the heel.

In fractures of the thigh, three short splints are required for the outer, front, and inner portions of the limb; they should extend from

the pelvis to the patella and lower edges of the condyles. They resist the action of the muscles, and prevent the straps or tapes round the limb from injuring the soft parts. In fractures of the leg three short splints are required; two for the sides of the limb, extending to the sole of the foot, and having a small hole at the lower extremity, corresponding with one on the same side of the foot board; holes are also made to receive the malleoli, the one for the inner ankle being nearer the anterior edge of the splint than that for the outer. These steady the foot and enable the patient to lay the limb upon the side. A third splint, which is composed of half beech and half thin slips of deal, turned up a little at either end, is intended to lie upon the front of the leg. This prevents the upper fragment from being displaced by pressure on the calf, and protects the integuments from the straps or tapes. Mr Amesbury prefers straps with buckles to tapes or bandages, as by them pressure is more easily regulated.

Such is Mr. Amesbury's apparatus for fractures of the lower extremity below the superior third of the os femoris, which, when once constructed, an operation requiring some mechanical skill, may be simply regarded as consisting of a double inclined plane, connected by a joint and steel rod, so that the angle can be altered, of a foot board and lateral splints. Its mode of application is exceedingly simple and easy, more so we are inclined to believe than the splints of Boyer or Dessault.

In a case of fractured leg, the instrument should be first fitted to the sound limb, the foot board being brought up close to the foot. A soft pad should be procured long enough to cover the leg and thigh pieces, and adapted to the inequalities of the limb. A tape should be passed transversely upon the back of the foot board near its loose end, under a strip of leather, and its ends carried through the brass eyes on the sides of the thigh piece and left hanging. The fractured limb should then be carefully placed on the instrument, with the heel in the shoe. The anterior and internal short splints for the thigh are now to be applied and secured by the straps, so as to make very little pressure; one strap over the condyles should be drawn closer than the others, to prevent the knee from rising from the instrument. These splints are merely to protect the thigh from the straps. The tape across the foot board should now be drawn as tight as is comfortable to the patient; it

serves to keep the foot board close to the sole of the foot. The leather of the shoe is to be placed over the instep and secured.

So long as any severe inflammation exists, the limb needs no other support; leeches, cold lotions, &c. can now be freely applied; the patient may have his bed made, his bowels evacuated, &c. without disturbing the fracture, if care be taken not to turn the instrument to either side.

When inflammation has been subdued, the short splints for the leg are to be applied and secured moderately by the circular straps, and by a tape through the small hole at the end of each side splint and the corresponding holes in the foot board. The straps on the thigh having been drawn a little closer, the patient may be furnished with a sling attached to the heel of the foot board, by means of which he can have perfect command over the limb, and can place it in what position he pleases, throw it across a chair, go about on crutches, &c.

In fractures of the os femoris, the instrument should also be fitted to the sound limb, the thigh piece being regulated so as to extend from the bend of the knee to within half an inch of the tuberosity of the ischium. The pad should be carefully made, a little longer than the instrument, that it may fall over its upper end, and be thick enough at this part, when compressed, to fill up the space between the instrument and the tuberosity of the ischium; in this way it will prevent shortening of the limb and any injury to the soft parts. The limb being now placed on the instrument, the foot board should be fixed by the tape, and the foot by the shoe, as in fractures of the leg. The anterior leg splint should be placed on the shin, and a strap or two passed round the leg. A long broad strap with a sliding pad being previously carried between the brass plate and the steel bars, one assistant should press the upper end of the instrument close against the back of the thigh, while the other draws down the instrument, and of course the lower fragment, till the upper end of the instrument passes the tuberosity of the ischium, in the same manner as when placed on the sound limb. The surgeon having ascertained this point, and that the bones are in apt and proper contact, the broad strap under the brass plate should be crossed upon the front of the thigh, passed round the pelvis and buckled. This strap keeps the instrument close to the back of the thigh and connects it with the pelvis, and therefore the apparatus and lower part of the limb are made to follow those motions of the

limb which tend to disturb the fracture. The limb should be left resting on the heel, with the patient on his back, so long as inflammation is severe, and the thigh being bare, any application can be made without disturbance.

As soon as high action is sufficiently subdued, the short thigh splints, suitably padded, should be secured on the limb by means of the circular straps. The broad strap, previously carried round the thigh and pelvis, should now be carried under the leathers or tapes usually placed on the back of the short splints, made to cross on the outer of these splints, and again buckled round the pelvis. This strap keeps the upper ends of all the splints close upon the upper fragment, and serves to connect them with the pelvis.

If the upper fragment be secured firmly by the splints, and there be no displacement, the position of the limb in bed may be altered at pleasure, not by means of the sling, nor by any muscular effort, but by means of the finger acting on the strap at the lower end of the thigh, care being taken that the pelvis and limb move together in the same direction. During the cure, attention should also be paid that the instrument does not ride over the tuberosity of the ischium, as this would indicate a shortening of the limb. If this object be not effected by the above means, which will probably seldom fail, extension may be then made by a tape, fastened to the brass eyes on the side of the thigh piece, and carried in a line with the thigh part of the instrument, over a pulley fixed at the foot of the bedstead. To this tape should be suspended a weight sufficient for the purpose intended.

In conclusion, Mr Amesbury adduces cases illustrating the value of the apparatus, and states that it fulfils every indication for fractures of the leg, and has succeeded in every case of fractured leg and thigh for which it has been used. It is manifest, however, that the strap round the pelvis can but imperfectly fulfil the indication of so connecting the pelvis and thigh as to prevent all motion at the hip joint, and consequently the disturbance of the superior fragment by the action of the flexors and extensors of the thigh. Pressure by means of the splints and straps may prevent such disturbance, when the injury exists in the lower portion of the os femoris, but cannot be adequate in fractures of the upper portion. Experience has convinced Mr Amesbury of this truth, and hence in his recent publication, the title of which heads our article, he has proposed a more simple and efficient apparatus.

This work he has divided into two parts;—in the first he treats of fractures of the upper third of the thigh bone; in the second of ununited fractures.

PART I.

Chapter I. treats of the causes, symptoms and nature of fractures of the upper third of the thigh bone; and first of fractures of the cervix femoris. On this subject much has been lately published by Sir Astley Cooper and others. The division of such accidents by him into those within and without the capsule is adopted by Mr Amesbury, who, however, would subdivide each of these classes into two others: 1. Into fractures without any considerable laceration of the close coverings of the neck of the bone; and, 2. Into those accompanied with an extensive laceration or complete division of these coverings.

Fractures within the capsule with little laceration of the investing membranes.

Sir Astley Cooper has admitted the possibility of these accidents; and this is confirmed by *analogy*, as there is no reason why such injuries should not occur here as well as in other bones; by *experiments* on bones in subjects recently found dead; and by *facts*—as actual inspection of the parts in cases where death occurred soon after the accident. Of course the *diagnosis* in such cases is exceedingly difficult, as there is no separation of the fragments, seldom any deformity, any eversion or inversion of the limb; no crepitus can easily be produced, and often the patient retains the power of flexing and rotating the limb at the hip joint, although not without much pain. This kind of accident "may be suspected when the patient feels, immediately after he has sustained this injury, a remarkable diminution in the powers of the limb. He feels pain at the upper and inner part of the thigh, especially in the line of the tendon of the psoas magnus and iliacus internus, which is increased when the limb is made to bear a part of the weight of the body, and sometimes when the limb is extended in a straight line with it, or when it is bent upon the pelvis, and at the same time rolled inward. He experiences tenderness in the joint when pressed upon. Crepitus is sometimes felt, and there is, occasionally, a slight degree of retraction and eversion of the limb." In all examinations of such accidents, care must be taken not to

increase the laceration of the membranes of the bone by the efforts to produce crepitus, especially in bending and extending the limb.

The interesting question now arises, will such fractures unite? and if so, what is the nature of the uniting medium? Mr. AMESBURY first examines the manner in which the head and neck of the bone are nourished in their natural uninjured condition. Nourishment is afforded almost entirely by vessels passing from the periosteum and other investing membranes, and from the lower portion of the substance of the bone. Those vessels which pass into the ligamentum teres are so minute, that we cannot suppose the head of the bone can derive any considerable portion of nourishment from this source. In case of fracture within the capsule, the pelvic fragment will be deprived of that portion of blood which was furnished through the substance of the bone, while that through the investing membranes will in a great measure continue, as they are but slightly lacerated in these cases. Now, as it is a general law that fractures unite more or less readily, according to the vascularity of the fragments, it follows that as the pabulum is in this case diminished, the union will be retarded; but there is no reason to suppose that eventually a bony union will not be accomplished, as the number and size of the vessels of the investing membranes would no doubt be adequate for this purpose. The fact, then, that under ordinary treatment union does not usually occur, is referable to the imperfection of the means employed, and not to the nature of the injury; the fault lies at the door of surgery.

Fractures within the capsule, in which the close coverings of the bone are nearly or quite divided.

This state may occur at once, or it may arise from the former condition of parts in consequence of improper management, involuntary contraction of muscles, or the influence of irritation or pressure exciting the ulcerative inflammation in the investing membranes. The symptoms are generally well marked, and well known to surgeons; such as retraction, eversion and crepitus, which last can usually be excited by extending the limb, and then rotating it while the head is fixed in the acetabulum by means of the fingers. The most prevalent opinion, and one supported by the authority of Sir ASTLEY COOPER, is that no osseous union can occur in such cases, and of course that they are in a great measure beyond the aid of the surgeon. This opinion is chiefly founded on the fact, that the head of the bone in such fractures can only be supplied with

blood through the ligamentum teres. That this supply is sufficient for nutrition is evident, as, perhaps with one exception mentioned to our author by Mr Brodie, the head of the bone has always preserved its vitality. Observation has also demonstrated that the fractured surface of the pelvic portion has become smooth, more dense, and hard like ivory, which changes must have been the result of an inflammatory action, as friction alone could not have had this effect. The head of the bone thus receiving blood sufficient not only for the preservation of its life, but also for ossific deposition, may doubtless "accept of the union" offered by the lower fragment, provided a proper apposition of the fractured surfaces be steadily maintained for a sufficient period, in the same manner as splinters of bones and other parts entirely separated from the body have reunited. The possibility of this osseous reunion has been demonstrated in many cases, and our author alludes to four preparations in which this bony connection may be exhibited. Hence, the conclusion seems justifiable that nearly all the cases in which bony union has not occurred, result not from any physical impossibility, but from the inadequacy of the means adopted in their management. These views are confirmed "by the consideration that, though the periosteum and reflected membrane be completely divided, and the head of the bone consequently deprived of the principal part of the nourishment naturally sent to it, a vascular communication is again speedily re-established by the production of organized matter;" and "it is probable that the head of the bone is nearly, perhaps quite, as well nourished as when a fracture exists without laceration of the periosteum and reflected membrane;" a fact which has been altogether overlooked by the supporters of non-union; and one which strongly militates against the opinion that want of nourishment is a *principal* cause of these fractures being so seldom reunited.

Our author next examines at some length the question, whether bony union is more advantageous to the patient than a short ligamentous connection. He decides affirmatively, although he acknowledges that in several cases of bony junction the patients had little useful power over the injured limb. This was dependant on a partial absorption, and of course shortening of the cervix femoris, which absorption Mr. Amesbury refers to the irritation kept up in the seat of fracture by the motion of the fragments, and hence he infers, and apparently with great propriety, that there is no necessary connection between bony union and a shortening of the cervix,

and that this shortening will not probably occur where irritation has been prevented by adequate mechanical measures. These are, however, points which future observation must determine. We should suppose that no one would doubt the propriety of effecting a bony union if this result can be obtained by any suitable and judicious measures. The causes of non-union may be referred to four heads. 1. A diminution of the quantity of blood sent to the pelvic portion; 2. Absence of continued pressure; 3. Want of apposition; and, 4. Want of rest. The first of these causes Mr. AMESBURY, contrary to all other surgeons, regards as the *least important*, for reasons already noticed, and believes that union will generally, of course not invariably, result, provided the other indications be fulfilled. Should even bony union not be accomplished, yet a short ligamentous connection may be found of great value to the patient.

Fractures of the thigh bone external to the capsule, without any considerable laceration of the periosteum.

The diagnosis of this accident is often obscure, as patients thus injured have been able even to walk after the accident, and the most careful examination has sometimes failed to detect a fracture which subsequent dissection has proved to exist. The symptoms are so similar also to those of fracture of the same character within the capsule, that it is often impossible to locate the particular portion injured.

Fractures of the cervix external to the capsule, with great laceration of the surrounding parts.

The symptoms here also are similar to those of fracture within the capsule with much laceration. The retraction in this last case is generally greater than when without the capsule, owing to the dense fibres of the capsular ligament which are inserted into the root of the neck, and are very seldom entirely torn through. Fractures of the cervix are very often partly within and partly external to the capsule; they are not however to be detected by any peculiar symptoms, and fortunately the treatment does not vary in these different cases. All these fractures which are external to the capsule, and those which are partly within and partly external, unite readily by bone, and, in the opinion of our author, might be made to do so without any shortening or deformity, except where the bone is much shattered.

Fractures of the trochanter major.

These are sometimes transverse, sometimes oblique, sometimes complicated with fracture of the cervix, and in some cases the frac-

ture passes through the trochanter below the cervix and above the trochanter minor. The prognosis in these fractures is favourable, and where there is no comminution, union may be effected without deformity of the limb.

Fractures just below the trochanter minor.

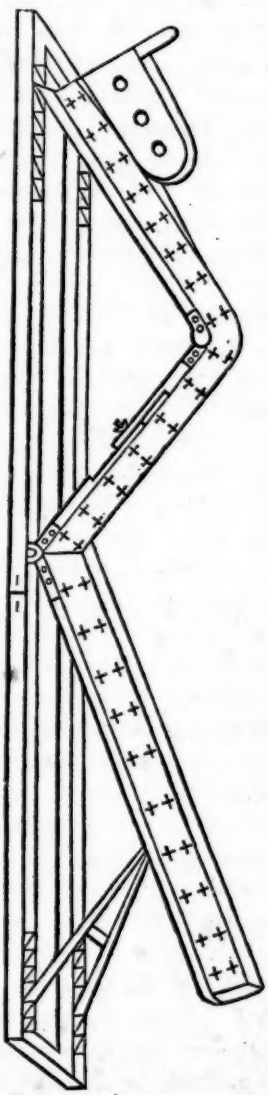
In these cases the upper portion is usually somewhat abducted, and is drawn forwards by the action of the flexors of the thigh, sometimes so much as to form nearly a right angle with the lower portion. The lower portion is commonly drawn up beneath the upper, sometimes several inches, giving rise to much pain, and, if union should occur, to a very distressing deformity. These fractures admit of being united with the greatest facility, and without the least deformity. In this country very little attention has been paid to them, although they demand a peculiar treatment.

Chapter II. This comprises our author's suggestions for the treatment of fractures of the upper third of the thigh bone, which we would recommend to the attention and trial of the profession. The means proposed are exceedingly simple, the principles are very specious, if not positively correct, and the success has been far greater than from any plan hitherto devised, a fact which will scarcely be doubted when men of the experience and character of Sir Astley Cooper declare that nothing is to be expected from mechanical measures in fractures of the cervix femoris, especially within the capsule.

Treatment of fractures of the cervix femoris, within or without the capsule.

The principal part of the treatment is mechanical. Should the inflammation of the soft parts be too active, antiphlogistics are requisite to prevent suppuration or gangrene; "but great care should be taken not to reduce the action of the part too much, as this would only tend to retard the uniting process;" and we would add, that tonics and nutritious diet are hence sometimes necessary to keep up a sufficiency of action. In the mechanical treatment, the indications to be answered are, 1. To keep the limb of its natural length; 2. To keep the limb in the bent position; 3. To prevent eversion or inversion of the foot; 4. To keep the trochanter a little raised; 5. To keep the fractured surfaces in close apposition; 6. To prevent the fractured surfaces from moving on each other. Mr Amesbury investigates how far these indications are fulfilled by any of the usual measures employed, such as the short splints, the double inclined frame, Desault's and Boyer's splints; and it

need hardly be remarked, that if the above indications are required to be fulfilled, which can hardly be doubted, these means are altogether inadequate. Mr. Amesbury has proposed a new apparatus, termed by him "a fracture bed," for meeting the necessities of the case.



"It consists of a frame which has a joint near the middle, and which is made to support four pieces of board, long enough when connected for an adult to rest upon in the extended position; of a foot board, pelvis strap, mattress, and a convenience to receive the fæces. The two pieces of board which form the middle plane are made to slide upon each other, so that this plane might be adapted and fixed by screws attached to it, with the greatest accuracy, to the natural length of the patient's thigh. In this plane there is an opening of a form and size to receive the receptacle for the fæces. When the receptacle is in the hole it is retained in its proper position by a shelf, which shuts up so as to close the opening when the receptacle is removed. This plane is connected to the upper and lower planes by rule joints, which allow the three planes to be placed in connection upon the frame at any angles that may be required. The joint formed by the middle and upper planes rests upon the middle of the frame when the bed is used. The upper plane may be kept raised from the frame, so as to incline towards the foot of the bed, by means of a supporter appended to its under surface. The loose ends of this supporter are received in racks formed in the upper end of the sides of the

frame. At the lower end of this plane the pelvis strap is attached. The lower end of the lower plane is received in racks, formed in the sides of the lower end of the frame, which supports it so as to make it form with the middle plane any angle that the surgeon might deem advisable. The foot board which is connected to the lower end of this plane answers the double purpose of retaining the foot in its proper position, and of keeping the bed clothes from pressing unpleasantly on the toes. The mattress consists of two portions, which are sewn together, so as to form a joint like that of a paillasse. The part upon which the trunk rests is double the thickness of that upon which the lower extremities are placed."—P. 133, 134.

When this apparatus is employed, three boards should be laid across a common bedstead at the lower, middle, and upper portions, on which the fracture bed should be placed, so that the joint of the frame may be supported by that which lies in the middle. The upper plane should be raised to an easy position, and the lower and middle planes should be made to form a double inclined plane. The mattress is to be placed so that the joint in the mattress should lie over the joint formed by the upper and middle planes, with the edges which are sewn together placed downward. The whole is to be covered by a perforated blanket and sheet tacked to the edges and to the opening in the mattress, so that there may be no seams or wrinkles to hurt the patient. The foot board should be placed in the hole made in the lower plane, corresponding to the injured side, and the pad placed in the hole in the mattress. On the fracture bed thus prepared the patient should be placed, with his limbs over the middle and lower planes. Both limbs should now be measured from the anterior superior spinous process of the ilium to the base of the patella, and if there be retraction, the middle plane should be elongated sufficiently to make the injured limb exactly of the same length as the other. This being done, the plane should be firmly fixed at its proper degree of elongation by the retaining screws which pass through the two portions of it. The limb, having a spiral bandage neatly applied from the toes to the knee, should now be fixed with the foot between the legs of the foot board, by means of another bandage which is carried twice round the ancle; the two ends are then crossed upon the instep, and passed under the legs of the foot board, brought together and tied at the bottom, so as to keep the

leg and thigh firmly fixed upon the respective planes of the bed. While this is being done, care should be taken that the patient does not shift the pelvis. Thin pads should be placed between the sides of the foot and the legs of the foot board, to keep the foot upright. A thin pad should also be placed between the upper part of the back of the thigh and the mattress, to raise and support the trochanter major. *The limb ought now to be exactly the same length as the sound one, and the foot perfectly upright.* A splint suitably padded, and long enough to extend from the knee to the pelvis, should then be placed on the outer side of the thigh. This is to be secured to the thigh at the lower end by a piece of bandage, and over its upper extremity the pelvis strap, which passes round the pelvis just below the superior anterior spinous processes, is to be buckled with a degree of tightness regulated at all times by the particular state of the fracture.

"When the limb is thus secured, all the indications I have noticed are most fully answered. The limb is supported in the bent position, which is the easiest position, and also prevents that long continued stiffness of the knee which is observed to arise from keeping the limb for a long time straight. The limb is maintained of its natural length. The foot is kept upright, and fixed in such a manner as to prevent the limb from moving; and the pelvis being at the same time fixed by the pelvis strap, the fractured ends of the bone are kept perfectly free from motion. The trochanter is supported, and the fractured surfaces being brought together, are maintained in close apposition by the pelvis strap; which, at the same time that it fixes the pelvis, passes over and acts upon the upper end of the splint which is placed along the outer side of the thigh, so as to be the medium through which the pelvis strap presses the trochanter major towards the pelvis, and with it, of course, the fractured surface of the trochanteral portion of the bone."—P. 142, 143.

In support of the above plan, and in proof of its efficacy, cases are given of fractures of the cervix, in which the fracture bed was employed to the comfort of the patient and with the advantage of procuring a firm union with little or no shortening or deformity of the limb. The time which was spent on this bed varied in the different cases: in the first it was resorted to on the twelfth day, and was used *three* weeks. The patient was able afterwards to walk with only a slight limp, and had no shortening of the limb. In the second case, the patient was placed on the apparatus on the eighteenth day, where he remained *eight* weeks, at which time union was firm; the limb was shortened one quarter of an inch. He re-

covered so as to walk with freedom and without the least claudication. In the third case, it was applied on the fourth day and retained for *eight* weeks; the patient, an old woman, æt. 72 years, was subject to rheumatism and did not recover rapidly, but was able to walk with so much equality of power on both sides that it would be difficult to say which limb had been injured. There was no discoverable shortening, or other deformity. In the fourth case, also a female, æt. 67, the accident happened on the 28th of February and the apparatus was applied on the 5th of April. It was continued ten weeks; union occurred with scarce any perceptible difference in the two limbs. "She was able to walk without any assistance, not however yet without limping." A fifth case is reported to Mr Amesbury by Dr Clark, in which a lady 70 years of age, was placed on the fractured bed nine weeks after the accident, where, at the time of the report, she had remained for six weeks with great comparative comfort, the limb remaining steadily fixed in the position in which it was first placed. In a sixth case, reported by Mr Haines of Surrey, a gentleman aged 54, was placed on the bed, on the sixth day after a fracture of the cervix, where he remained for ten weeks perfectly quiet. In the twelfth week he was able to get down stairs without assistance, and in the sixteenth did duty at his own church, after walking near one-third of a mile up hill.

Treatment of fractures of the trochanter major when above the cervix.

The patient is to be placed on the fracture bed as in cases of fracture of the cervix, but the planes should be fixed at more obtuse angles, and care should be taken that the limb be supported in a proper position, with the ball of the great toe and the patella in a line with the anterior superior spinous process. The trochanter should be supported by means of a pad, placed between the mattress and the limb, and the action of the glutei muscles be resisted by a bandage applied so as to keep the fractured surfaces in close apposition. A splint should be placed on the outside of the thigh and secured as in fractures of the cervix.

When below the cervix, the treatment is precisely the same, except that attention should in this case be paid to preserving the length of the thigh which may be shortened.

When the fracture of the trochanter is complicated with fracture of the cervix, retraction usually occurs, and the treatment is to be

conducted as in the last case, care however being taken not to make much pressure on the outer side of the limb by the splint, as the fractured parts might be forced into unnatural positions.

Treatment of the fractures of the femur just below the trochanter minor.

These fractures it is almost impossible to manage by the straight position, and under every modification of apparatus have proved very troublesome. For the upper fragment is displaced by the flexors of the thigh, its ragged end irritates the extensors of the leg, while the rough extremity of the lower portion irritates the flexors, so that great retraction is produced and much inflammation excited: while no machinery hitherto employed has been effectual in fulfilling the various indications, owing to the impossibility of acting on the superior fragment, excepting through the medium of the pelvis.

"In these cases there are seven indications to fulfil: 1. The pelvis should be fixed. 2. The thigh should be raised so as to form an angle with the pelvis, that the lower portion of the fractured bone shall be brought into a natural line with the pelvic portion. 3. Extension must be kept up, so that the fractured ends may be prevented from overlapping. 4. Inversion and eversion of the foot must be prevented. 5. The fractured surfaces must be placed in close apposition. 6. The fractured ends should be prevented from moving on each other. 7. The fractured ends must be supported so as to guard against any displacement which might otherwise arise from the accidental action of the muscles of the limb."

Mr Amesbury believes that these indications can be so completely fulfilled by the methods which he suggests, that these fractures will readily unite without the occurrence of shortening or deformity of any kind: *neither the obliquity of the fracture at this part, nor the action of the muscles of the injured limb*, can any longer be considered as an excuse for any unfortunate result arising from ignorance or inattention.

The patient should be placed on the fracture bed; the planes being fixed at more acute angles than for fractures of the cervix, in order to relax the iliac and psoas muscles. A roller should be neatly applied to the foot and leg, the foot be secured and the thigh extended as formerly directed, an assistant fixing the pelvis at the angle of the upper and middle planes. The surgeon should now place a pad between the back of the thigh and the mattress, wide enough

for the thigh to rest upon, and then apply three splints to the thigh; one on the inner side of sufficient length to reach from the pelvis to the lower part of the inner condyle of the femur; another from the superior anterior spinous process to the base of the patella, and the third from the upper part of the trochanter major to the lower part of the outer condyle. These splints should be well made, neatly padded and confined to the thigh by three circular straps passed round the limb and under the pad on which it lies. The pelvis strap should now be buckled so as to pass over the upper ends of the outer and front splints, but not so as to make the latter press uncomfortably upon the superior anterior spinous process of the ilium. If the fracture be very oblique, care should be taken to pad the splints so as to press the fractured surfaces together. The apparatus should be continued for at least a month or six weeks; and for ten or twelve after it is omitted, the patient should be careful in using the limb, for fear it might bend or become shortened.

Mr Amesbury observes, that his apparatus for fractures of the leg and lower part of the thigh, may also answer for the fracture now under consideration, but it has hardly sufficient influence on the upper fragment and pelvis, especially in any oblique fracture.

PART II.

Fractures of long standing.

Chapter I. treats of the causes and nature of fractures of long standing; that is, of fractures where union has been delayed much beyond the usual period, and where some action still exists, and those where excitement has ceased and an artificial joint has formed. We need not follow our author into the detail of the causes, whether constitutional or local, as he notices those which are usually assigned by writers, but simply observe that he attributes the failure of union in a large majority of cases to *the want of rest* at the seat of fracture. The continual motion allowed by most of the various measures adopted for the treatment of fractures, particularly of the os humeri and the lower extremities, prevents union; the inflammatory action gradually subsides, leaving a useless limb, or suppuration and abscesses are formed, converting simple into compound fractures, and endangering or destroying the life of the patient. In the opinion of Mr Amesbury, such consequences, or even deformity, except where there is great comminution of bone or exfoliation, are no longer excusable; even the involuntary action of muscles can

he believes, be effectually prevented or restrained. The parts being kept at rest, union will occur in a reasonable time, after most recent fractures. Should this not be effected from the imperfection of machinery, or from any other cause, the ends of the bone are sometimes found connected by a ligament, and sometimes by a ligamento-cartilaginous structure; occasionally the fractured ends are enlarged from a deposition of bone, and are connected together by a preternatural capsule, containing a fluid resembling synovia. In such cases the opposing surfaces move freely on each other.

Chapter II. Treatment of fractures of long standing; and first, of the usual mode of treatment, with cases and observations.

The object proposed by surgeons is to reproduce inflammation in the seat of injury, either of the adhesive or suppurative kind, to fulfil which, numerous measures have been devised, and our author notices in succession the most important. His criticisms we shall pass over, contenting ourselves with the remark, that in our opinion he has much undervalued the seton proposed by Dr Physick, which is less injurious and much more efficient than the experience of British surgeons has exhibited.

The plan of treatment which the author has found most successful, with cases and observations.

This plan is founded on the principle already alluded to; that an action higher than the natural standard is necessary to the formation of callus; in other words, the adhesive stage of inflammation must be excited. Under these circumstances some pain, similar to that of rheumatism, is usually experienced. The indication, therefore, is to excite this preternatural action in the ends of the bones and in their periosteum, and at the same time avoid all the causes of non-union.

"I had already possessed myself of means by which I could prevent what, I believe, was the principal cause of non-union in almost all the cases I have seen; viz. motion of the fractured ends. I therefore conceived, that I had only to excite the action of the parts, and perhaps to produce absorption of some adventitious deposit, in order to unite many of those which had been of long continuance. But how were these desirable objects to be accomplished? It occurred to me that they could not be so well effected by any other plan as by the influence of local pressure. Strong pressure produces inflammation, and at the same time absorption of the parts which are pressed upon. Pressure I could readily produce and keep up for an indefinite period; and at the

same time maintain the parts in a state of quietude by the contrivances already in my possession."

Influence of pressure and rest in the treatment of fractures of long standing in the humerus.

This principle is applied by means of an apparatus which Mr Amesbury has suggested for fractures of the humerus, a description of which was published in the 7th volume of the Philadelphia Medical Recorder, and which does not materially differ from the rectangular splints generally used in this country for fractures of the lower portions of the os humeri, assisted by a short splint to the arm. It is employed on the principle of fixing the lower portion of the limb as well as the upper, so that any impulse to the lower part shall be propagated, not to the site of the fracture, but to the shoulder joint. In *oblique* ununited fractures, the fragments must be maintained in *tight apposition* by padding the splints and securing them firmly by straps or bandages. In *transverse* fractures, the fractured surfaces must be forced together, generally by means of a short sling, which is made to act in the direction of the line of the bone. By these measures some rheumatic pain is usually excited in the course of a few days, followed sooner or later by bony union. Sometimes additional pressure must be made by means of an apparatus connected with a screw, so that the force can be carefully regulated.

Similar treatment by means of convex splints has been completely successful in *ununited fractures of the forearm.* The practice is also applicable to *similar fractures of the thigh* by means of the fracture bed and splints. Should the accident exist in the cervix, the pelvis strap should be drawn closer than in recent fractures. Should it exist just below the trochanter minor and be oblique, the splints must be made to act more powerfully upon the broken ends, so that the fractured surfaces may be pressed together in the transverse direction. If the fracture be transverse, a power should be employed in addition to the splints, so as to force the fractured ends together in a line with the long axis of the bone. This might be either a bag of shot placed on the knee, which is perhaps preferable, or a padded strap which should be applied so as to exert its influence upon the knee and the pelvis. In fractures of the middle and lower thirds of the thigh, the apparatus for recent fractures of this portion of the limb may be successfully employed. When the fracture is transverse, a strap carried from the pelvis to

the knee will sometimes be required in addition, in order to keep up pressure in a line with the bone. In all cases the straps are kept tighter than in recent cases. The same principles and practice are applicable to ununited fractures of the leg, which perhaps are more readily cured than those of other bones of the extremities. Mr Amesbury employs his apparatus in these cases also, forcing the fractured ends together in a transverse or lateral direction, and fixing the foot board so as to prevent shortening in *oblique* fractures. In *transverse* fractures of long standing, perhaps some shortening is inevitable; the leg piece of the apparatus in these cases should be made rather shorter than the natural length of the limb, so that when the limb is placed on it, and the foot (protected at its sole by pads) secured against the foot board, the thigh will not be in close contact with the thigh piece of the instrument. The limb, being firmly placed in this situation, and the foot being at a right angle with the leg, the fractured ends may be strongly forced together by means of a strap, which passes round the thigh just above the knee, and the apparatus forcing the thigh towards the thigh piece, of course the upper fragment downward, while the lower fragment cannot recede from the upper, as the foot is pressed firmly against the foot board.

In exemplification of the practicability and success of the above treatment, our author relates seventeen valuable cases with every requisite degree of minuteness, in sixteen of which he succeeded in effecting bony union, a success certainly as great as could be expected, and superior to that which has attended other measures. The unsuccessful case seemed dependant on some disease of the general system. The following table presents an interesting summary of the sixteen cases:

In the Humerus, six.

1.	Fracture had existed	(about) 11 months.	United in (about)		7 weeks.
2.	do.	10 months.	do.		6 weeks.
3.	do.	13 weeks.	do.		32 days.
4.	do.	19 weeks.	do.	1st application	28 days.
			do.	2d application	31 days.
5.	do.	16 weeks.	do.		21 days.
6.	do.	16 weeks.	do.		35 days.

In the Forearm, two.

1.	Fracture had existed	7 months.	United in	7 weeks.
2.	do.	(about) 8 months.	do.	7 weeks.

In the Femur below the Neck, four.

1.	Fracture had existed	16 weeks.	United in		4 weeks.
2.	do.	66 weeks.	do.		10 weeks.
3.	do.	11 weeks.	do.		2 months.
4.	do.	(about) 19 weeks.	do.	(about)	10 weeks.

In the Tibia, four.

1.	Fracture had existed	8 weeks.	United in	38 days.
2.	do.	7 months.	do.	40 days.
3.	do.	15 weeks.	do.	33 days.
4.	do.	38 weeks.	do.	33 days.

Mr Amesbury has had the management of one case of ununited fracture in the cervix femoris. The patient was kept on the bed for eight weeks, and was greatly benefited, the limb being shortened but one quarter of an inch instead of one inch, as when the treatment commenced. He however did not recover the use of his limb, and was obliged to use crutches; he was also subject to pain in the groin, especially when the flexors were moved, the cause of which was not evident.

Another case was also treated, but with little advantage, as owing to a disease in the chest the patient could not be confined on his back as long as was necessary.

Mr Amesbury makes a few remarks on the *treatment of fractures of long standing which do not admit of being united by the influence of pressure and rest alone*, where the impediment arises from disease of the bone, from interposition of a foreign body, from dead bone, and finally from the existence of a preternatural capsule. He relates an interesting but unfortunate case of this character, in which amputation was performed after various methods had been attempted to cause union.

Of all the cases subjected to his care, he says—"I have failed to produce union in four cases, independent of those which I have stated happened in the neck of the thigh bone. Two of those which were in the humerus, were admitted into St George's hospital, under the care of Mr Rose, who favoured me with the management of them while subjected to the influence of my apparatus. In one of these there appeared to me to be some disease of the bone. In this case a seton has since been used, but I understand without any benefit. The other occurred in a young man whose constitution was strong and apparently free from disease. In this it was doubted whether a portion of muscle did not exist

between the broken ends of the bone. I am inclined to think this was the case, or that there was a preternatural capsule formed."

The other two cases were treated in St Thomas's Hospital by permission of the attending surgeon, Mr GREEN. One was in the middle of the humerus, the other in the upper part of the middle third of the thigh bone. In this last pressure having failed, a seton was passed, but on the nineteenth day the suppuration was so considerable and the hectic symptoms so severe that it was necessarily removed. The patient recovering from the effects of suppuration, an attempt was made to cut off the ends of the fragments. A preternatural capsule was discovered; the operation could not be fully completed, as only one fragment could be sawed. Various measures were subsequently adopted, but amputation became necessary and was submitted to. In all these cases of preternatural capsule, our author would suggest that it would be better to expose the ends of the fragments by an incision, and remove the ligamentous matter by means of the knife or caustic, and afterwards, by means already detailed, to keep the bones in close apposition and at rest. Union would probably ensue.

On the whole, Mr AMESBURY states that he has seen fifty-six cases of ununited fracture, in twenty-two of which he employed pressure and rest with the effect of causing firm union in all excepting four cases; in one of these union was prevented probably by diseased bone, and in two others, by the existence of a preternatural capsule. In the thirty-four cases, Mr AMESBURY's plan was not pursued; various modes of treatment were adopted, but bony union has been effected, as far as our author has been able to learn, in only *one* solitary instance out of the *thirty-four*, and that after several months' suffering. The employment of pressure always produces some pain, which is a favourable and perhaps a necessary circumstance, but this was never so severe as to produce any noticeable fever, or even to affect the pulse according to the observations of our author.

In the Appendix, another case of fracture of the cervix femoris is detailed; which was treated in St Thomas's Hospital by means of the fracture bed, under the direction of Mr AMESBURY and Mr TRAVERS. The treatment commenced on the 11th day of August 1828, four days after the accident, and was continued ten weeks on the apparatus. In a few days afterwards the patient began to move about on crutches; and now, February 1829, both limbs are of equal length, the foot is in its natural position, and the patient "*can*

walk without limping or other inconvenience; the functions and power of the limb are perfectly restored."

We dismiss Mr AMESBURY's book, acknowledging that we have received much instruction, that we are favourably impressed with his principles and practice, and that, however great our prejudices have been, and still are, against the employment of severe pressure in injuries of the extremities, we cannot deny that it may prove the best remedy for ununited fractures.

ARTICLE V.—*Sullo Stato Attuale della Nuova Patologia Italiana. Considerazioni del Professore* GIACOMO TOMMASINI, *&c. &c. Edizione Seconda. Milano.* 1827.

Observations on the Real State of the New Italian Pathology. By G. TOMMASINI, *&c. &c.*

The author of this essay is a distinguished teacher of the medical school of Bologna. He adopted at an early period the Rasorian theory of *counter-stimulus*, and has been mainly instrumental, by his lectures and writings, in reducing it to method and giving it the necessary extension and illustrations. Our readers are by this time tolerably well acquainted with the outlines of this now called *New Italian Medical Doctrine*, which may be briefly summed up as follows: 1. A large majority of diseases to which the human frame is liable are dependent on phlogosis or excessive excitement, usually local in its origin, and diffused according to the sympathies of the part affected. 2. The persistence of this phlogosis throughout all the stages of the disease, however masked by various symptoms. 3. The remedies adapted to the cure of this morbid process are all endowed with a counter-stimulant virtue, either by directly diminishing the amount of the circulating fluid as by bleeding, or indirectly as by purging; or directly depressing the vitality of the fibre or organ, as by cold, digitalis, antimony, &c. without evacuation. 4. The toleration by the organ, or system generally, of counter stimulants is an index of the existence of the diathesis of stimulus, or of the phlogistic

state; as, on the other hand, the toleration of stimuli furnishes evidence of the presence of the diathesis of counter stimulus, or of pure debility.

Of the first part of this last proposition our readers have been furnished with examples in the former numbers of this Journal. For the present, we content ourselves with referring to the treatment of pleurisy by enormous doses of tartar emetic, without evacuations being produced; in the cases recorded by Dr Strambio of Milan (Vol. IV. p. 417); of rheumatism, by Professor Lallemand (Vol. VII. p. 407); and of various diseases as recorded by Dr Bayle (Vol. VIII. p. 413), all by the same remedy.

Professor Tommasini begins the work before us by assigning the reasons or rather motives for opposition to the New Italian Medical Doctrine. They are such as have been encountered by every advocate of reform, in every branch of science or morals, from any date which our readers shall choose to select, down to the present time. The opposition to a thing merely because it is new has this additional bad effect, that right and wrong are confounded; and both truth and error are often, the former retarded, the latter removed by the same ignorant outcry and equal misconception of the principles of logic and philosophy. Intolerance, by rousing the angry feelings of our nature, will always produce reaction; and what is decried in passionate ignorance will often be sustained in the same spirit. In a struggle thus conducted, the impartial searcher after truth is not allowed to preserve his neutrality—the attempt is treated, as in all kinds of warfare, with contumely and scorn.

The uselessness of the opposition to the new doctrine is exhibited, says the author, in its constantly increasing diffusion, and in the abandonment of the Brunonian practice by both young and old, not even excepting the opponents themselves. These persons, "as is generally known in the apothecaries' shops, employ the same antiphlogistic and counter-stimulant means with ourselves, in the same diseases which, agreeably to their view of the subject, either depend upon a state totally different from phlogosis, or which must be the result of invisible and mysterious organic changes."

The professor complains with some warmth of the unfairness and actually dishonourable conduct of some of his opponents, who, not content with assuming false premises in their controversial writings, go the length of giving actual mistatements on the one hand, and withholding facts on the other. They accuse the new doctrine of

being lavish in the use of poisons and waste of blood; they alter the returns of certain celebrated hospitals, and pretend not to know, that in the clinical one of Bologna the proportionate mortality, under a treatment conformable in every respect to the new views, is less than at any former time, and less than has been observed in other hospitals. Others again, and the evil is not confined to Italy, ashamed of giving under their own names untruths, have recourse to anonymous communications in papers devoted to politics, the conductors of which, by the way, be it said, display the excessive impartiality of not inserting replies to these persons' misrepresentations.

We could mention more than one newspaper in this enlightened city of ours, which has its columns open to letters and puffs commendatory of murderous nostrums, but hermetically sealed against statements setting forth the evils of their misapplication and indiscriminate use. What potent reasons sway the conductors of these journals to take the side of empiricism may be perhaps conjectured. We know, however, that the only motives by which they were persuaded to let those on the side of order and reason caution the public against the dangers to which it was exposed, were by appealing to their love of truth and their promises of impartiality. Some may smile at the simplicity of character which supposed that such appeals would be responded to in the same spirit in which they were dictated. The philanthropist will however acknowledge that the weakness, if weakness it be, was not unamiable.

Professor Tommasini introduces a most imposing array of names of physicians, advocates of, or favourable to the new doctrine, in different parts of Italy. In proof of their community of creed he gives the following statement of the practical views now generally adopted by his brethren in Bologna. They are conformable, in most respects, with the doctrines of the physiological school of France, and of the most approved of our own medical teachers at home.

"None of them," says the author, "would now think of curing petechial fever and small pox, for example, by means of stimulating sudorifics, with the view of driving out through the skin, the contagious principle; or of cordial and tonic mixtures, in order to support the strength: nor would they be content to treat these diseases by demulcents and antiseptics, in the hope of obtunding and correcting the morbid matter. They all make use, both in petechial fever and small pox, and infectious diseases, from whatever cause proceeding, of the antiphlogistic treatment: nor are they restrained from bleeding, where the violence of the fever, or the danger to any

viscus indicates its use, by the circumstance of the disease occurring from a foreign or extrinsic cause. They well know that the pathological condition of these fevers is phlogistic; and well do they remember the refrigerating method recommended in such cases by SYDENHAM and DE HAEN, whose practice was, in this instance, in accordance with the maxims of the present day. They are not ignorant that the phlogosis, either of the meninges, or of the nerves, or of the gastro-hepatic system, or of the lungs; which, as verified by dissections, is the common cause of death in those attacked with small pox, petechial fever or measles, &c.; they are not, I say, ignorant that this phlogistic state is always identical in the different stages of the above diseases, whatever may be the foreign agency by which it was originated."

Even though we may admit that maladies of this class will pursue a *necessary march*, and that we ought not to try and cut them short by remedies of undue strength, but rather use mild measures, yet still, when the cure is accomplished, by means however simple, the treatment can only be antiphlogistic and quieting.

"In the last stage of the diseases of a regular and necessary march," the Bolognese physicians "do not insist on a treatment of such energy as could only be required at the acme of the malady, in order to arrest the impending phlogistic attack; but they would not be seen, because the treatment will vary with the stage, pass, even though the violence of the fever had subdued, to the use of exciting remedies. Thus, in puerperal fever, or in any alarming synochus or typhus fever, when an attack of the intestines, or liver, or diaphragm, or meninges induces nervous symptoms, which mask the disease or prevent the customary manifestation of its phlogistic nature; or when subsultus and convulsions supervene, or when a gangrenous degeneration seems imminent, they do not, on this account, fly to ether, or vinous drinks, or to musk, or laudanum. They well know that gangrene, *when it has taken place*, does not admit of cure; but that the process which precedes it, and which is phlogistic, is alone curable. Nor is traumatic tetanus, which more evidently than any other variety acknowledges a phlogistic origin, cured, as was unhappily at one time done, by opium, laudanum, and spirituous frictions along the spine; but by bleeding, where the case allows of it, and the application of leeches over the spinal column, and depressing or sedative remedies. Nor do the Bolognese physicians oppose any other method of cure than the counter-stimulant (*deobstruent*, so called) to chronic inflammations, such, for example, as slow enteritis or peritonitis, lingering gastritis, and the still more protracted phlogosis of the mesenteric glands. In wisely adapting the curative measures to the circumstances of the case, they do not allow themselves to be led into a directly opposite method of practice, on account of the languor of the functions, or the slight febrile disturbance: they would not have recourse to opiates merely to calm pain;

nor would the duration of the malady, a proof at one time to the Brunonians of indirect debility, induce them to try exciting remedies. Thus, for example, in dysentery you could not see them use stimulants, as BROWN pretended was necessary; nor alternate, as was constantly done in times past, tamarinds, cassia, ipecacuanha, (which was used throughout the disease) with sherry, or port wine, or laudanum or opium, (which was administered at night to procure sleep, and diminish or stop the evacuations.) They bear in mind the advice of TISSOT and ZIMMERMAN, to constantly rely on antiphlogistics in dysentery, a counsel entirely in accordance with the principles of the new doctrine. In ascites, the consequence of scarlatina, or in the obstinate cough, which is often the effect of measles, the practitioners to whom we refer throughout, do not have recourse to any other method of cure than that same antiphlogistic one, which was adopted with the view of moderating the fever in the acute stage of those diseases; because, the physicians of Bologna well know the laws of the *true diffusion* of membranous inflammation, and are fully aware that the diffused phlogosis, whatever may be the symptoms to which it gives origin, and which vary according to the location of the secondary attacks, constantly retains its primitive character, and is only curable by one kind of treatment. In palpitations of the heart or morbid vibrations of the arteries, and in chlorosis, even though originating from the depressing passions, or fright; in remittent fevers and in abdominal tumours, though proceeding from cold and moisture, they would not make use of stimulant or corroborant means, by an exclusive regard to the first causes of the malady. These physicians know full well, that between that first depression induced in the animal economy by sedative powers, and the succeeding development of many diseases, there is an intermediate re-action, admitted by the ancient writers, and by CULLEN, though called in question by BROWN; but clearly verified at every step of careful observation, and its nature confirmed by the kind of remedies which are of recognised utility in these diseases. In Bologna, no greater value is attached to symptoms than they deserve, nor is the curative plan derived from them, but from the pathological condition of the organs on which they depend. Hence, pain, for instance, is not cured by our physicians by means of opium and ether, when there is reason to believe it to be occasioned by a phlogistic state, in which nervous filaments are stretched. So, likewise, they do not attempt to cure weakness or paralysis by stimulants, because it is a *weakness;* but they treat it with sedative remedies and blood-letting, when there is reason to suppose it produced by congestion, turgescence, or phlogosis of the membranes and cerebral vessels. Thus, convulsions are not treated indiscriminately by antispasmodics, so called, whatever they may be: but the remedies are adapted to the nature of the morbid condition on which the convulsions depend; for they are not ignorant that bleeding may be an

antispasmodic, when the convulsions proceed from a phlogistic state, which would be aggravated by the use of excitants; as on the other hand, if the origin of the disease be of a different nature, it might be calmed by opium, ether and musk. As to *irritative* diseases, or those maintained by *irritation*, (in the Italian sense of the word,) assuredly none of the professors and physicians above mentioned are unaware of the locality of these morbid conditions, however much the symptoms of a sympathetic nature, or by consent of parts may show other and many organs to be interested: nor would any of them inopportunely torment, either by stimuli or antiphlogistics, a patient troubled with intestinal saburra or worms, or a calculus or the like; knowing, as they do, that the morbid phenomena proceeding from such causes, or from any condition of parts on which a perturbating or irritative action is exercised, cannot be removed by any other method than by the abstraction or destruction of whatever thus irritates or disturbs. And, finally, in what relates to the action of remedies, and the more generic and essential differences among them, there are none of the above mentioned class of physicians who do not distinguish (besides the irritative or chemical local action of certain medicines and poisons,) the *stimulant*, exciting, or healing action of some, and the *counter-stimulant*, depressing, antiphlogistic or deobstruent action of others. There are none of them who would use indiscriminately, opium, henbane, musk and assafœtida, or who would mix sulphuric ether with hydrocyanic acid or the distilled water of the lauro-cerasus."

Our readers will not, we believe, complain of the length of these extracts, which give, in the language of its most able and eloquent supporter, the medical creed of such a large and intelligent body of physicians as are those of Bologna and the other cities in Italy, adverted to in the work before us. To our friends in the country we would commend, in an especial manner, the admirable maxim respecting the complications of synochus and typhus fever; an adherence to which, while it would make them infinitely more reserved in the use of camphorated juleps, hot toddy, and wine in the secondary stage of these diseases, would also, we are assured from our own experience, lead them to more successful practice, by saving the lives of their patients, and, what is not without moment, their own feelings. We repeat this maxim. "*Thus, in puerperal fever, or in any alarming synochus or typhus fever, when an attack of the intestines, or liver, or diaphragm, or meninges induces nervous symptoms which mask the disease, or prevent the customary manifestations of its phlogistic nature; or when subsultus tendinum and convulsions supervene, or when a gangrenous degeneration seems imminent, they*

do not, on this account, fly to ether, or vinous drinks, or to musk, or laudanum."

Of nearly equal moment are the opinions inculcated respecting the identity of chronic inflammations. Though attacking different tissues, and of course evincing various symptoms; and though slow and lingering in their progress, they are still inflammation, and to be treated as such. Every reader must be struck with the close similarity of these to the doctrines of BROUSSAIS. The priority, however, rests with the Italians, since the Treatise on the Yellow Fever written by TOMMASINI in 1805, in which they are inculcated, is anterior to the first appearance of the Histoire des Phlegmasies Chroniques, by three years.

The history of the reform is thus given in the *Dictionary of Medicine of Turin.*

"RASORI was the first to recognise the necessity of modifying the Brunonian doctrine. He declared, in 1800, that the petechial fever, though asthenic in appearance, is of a phlogistic nature; and he showed that the remedies had recourse to for the cure of phlogistic diseases, are not entitled to the epithet of stimulating, but rather the reverse. TOMMASINI, in his work on the fever (yellow) of Leghorn, called the attention of physicians to the phlogistic process, and endeavoured to prove that phlogosis is a process always identical; that it is the proximate cause of almost all diseases; and that in diseases, even general ones, the *universality depends on the locality;* or in other words, that the *diathesis depends on the morbid process.* GEROMINI held the same opinion when treating of dropsy; so also FANZAGO had sustained the predominance of *locality* in speaking of *pathological conditions.* BROUSSAIS was posterior in date to the ITALIANS in maintaining the above doctrines, and was merely the first to allege, that the morbid process in febrile diseases is exclusively in the digestive canal. So that in fact if we substitute for the French word *irritation* that of phlogosis, and do not admit it to be exclusively in the digestive canal, there will be a perfect identity between the doctrines of BROUSSAIS and TOMMASINI."

The confidence which we should feel inclined to repose in the correctness of an opinion, thus arrived at by two distinguished teachers, in different countries, by different means of observation and process of reasoning, is somewhat disturbed, or, at least, the pleasure therefrom marred, by the discrepant views of these two rival reformers, respecting the nature and modus operandi of many powerful articles of the materia medica. The advocates of the new Italian doctrine class under the head of counter stimulants agents

which the physiological school of France qualify as most active irritants. The former invoke in their favour the experience of French practitioners themselves; many of whom, such as LAENNEC and others, have used large doses of tartar emetic with decided success in pleurisy, pneumonism and rheumatism, notwithstanding the strong denunciations of BROUSSAIS of its poisonous nature. His assertions that this drug irritates and inflames the gastro-intestinal surface would seem to be pointedly contradicted by the facts given in BAYLE'S *Bibliotheque de Therapeutique*, and quoted in our last number, p. 412, 413. Mercury, classed by the Italian physicians among the counter-stimulants, is equally reprobated as an irritant by BROUSSAIS. He is unquestionably correct as to corrosive sublimate, and indeed to any preparation of the metal when given for a length of time, or carried to the extent of producing ptyalism. But we must confess that we cannot yet consent to abandon calomel, well washed and prepared, and given in a sufficient dose to purge, or the blue pill in combination with other substances as a laxative, or occasionally, and with much discretion, as an alterative. That any one of the mercurial preparations is actually necessary in a hundredth part of the cases in which they are habitually prescribed, we, by comparing our own past with recent experience, firmly disbelieve: but that their use ought to be entirely abandoned is a position we are not yet prepared to take. The croton oil is declared by the celebrated MORICHINI of Rome to be a remedy calculated to remove entirely the inflammation of the intestinal canal, whose first violence has been subdued by bleeding, copious diluents, &c. This effect of medicines is considered by Professor TOMMASINI as the best criterion of the class to which they belong. Thus the impetus of inflammation moderated by bleeding would not, he tells us, be renewed by tartar emetic, or mercury, or nitre, or the croton oil, as it assuredly would be by wine, spirits, aromatics, &c. We think we can discover some notable modifications in the practical part of the new doctrine since our attention was first directed to the subject in 1817. We advert to the minor confidence reposed in the counter-stimulant action of remedies, as a substitute for bleeding to arrest phlogosis. The author of the work before us now distinctly warns against our presuming too much, by attempting to arrest an inflammation in its primary force and urgency by counter stimulant remedies, in lieu of availing of the prompt and uniform effect of venesection and local bleeding. The action of

counter-stimulants is not, he says, always prompt, nor uniform in all individuals, or all drugs, or preparations which are thought to be alike, nor in all circumstances.

In closing our remarks for the present on the work of the courteous and erudite professor of Bologna, we must be allowed to express the hope of being able ere long to make our readers still farther acquainted with the results of his pathological and clinical experience, and of showing at the same time in deservedly advantageous relief, Italian medicine and Italian physicians.

ARTICLE VI.—*Die Physiologie als Erfahrungswissenchaft. Bearbeitet von* KARL FRIEDRICH BURDACH, *mit Beiträgen* VON KARL ERNST VON BAER, HEINRICH RATHKE *und* ERNST H. F. MEYER. *Band I. Pp.* 606, *Leipzig*, 1826. *Band II. Pp.* 758, 8*vo*, 1828.

Physiology as an Experimental Science. By CHARLES F. BURDACH, *with contributions from* CHARLES E. VON BAER, HENRY RATHKE *and* ERNEST H. F. MEYER, *Volumes I and II.*

These two volumes form the commencement of a system of physiology, which, if completed upon the same plan with that pursued in the portion before us, will be certainly one of the most comprehensive that has yet appeared.

Commencing with the generation of organized beings of every species, from the simplest to the most complex, the work is intended to comprise a detailed view of all the vital phenomena they present, from the first moment of their existence to the period of their fullest development, in connection with the various organs or structures upon which these several phenomena depend. It will lay claim, therefore, to the title of a complete system of comparative physiology.

The two first volumes, which are all that have reached this country, are occupied exclusively with the consideration of generation, conception, and the life and development of the fœtus up to the period of its independent existence. They present a very

full view of all the facts at present known in regard to these subjects, and indicate the possession, by Dr Burdach and his coadjutors, of that peculiar industry and talent for research, for which his countrymen have been so eminently distinguished in various departments of human knowledge. The number of separate treatises and other writings referred to, so far as the work has advanced, amount to three hundred and sixty three, including nearly all our latest and most approved authorities in relation to the subjects treated of; with a number of German productions, with which we are in this country as yet but partially, if at all acquainted.

Dr Burdach has not, however, confined himself to a bare compilation of detached facts; a mere detail of the functions and structure of organized beings: on the contrary, he has attempted the more important, but far more difficult task, of framing with the materials he has so diligently collected, what may with propriety be termed a general theory of life. This, however, constitutes in our opinion the least valuable and interesting part of his labours; the one in which he has the most frequently failed. It is true that the subjects treated of in the present volumes, involve many of the most obscure points in physiology; in attempting to explain which, even the most acute minds have totally failed, or been enabled to present only vague and unsatisfactory conjectures.

But our objection to Dr Burdach is not that he has been unable to explain the mysteries of generation and conception, but his having presented, as the sober deductions from established facts, a series of purely metaphysical reasonings, expressed in a style, very frequently, so obscure as to leave the reader in doubt as to his actual meaning. Many of his doctrines partake in fact more of the mysticism of the ancient schools, than of that simple inductive philosophy, which can alone guide us to a knowledge of the laws of nature.

This circumstance is the more to be regretted, as the present work, from the talents and deservedly high standing of the author, is calculated to exert a very powerful influence over the physiological opinions of a large portion of his countrymen.

We should, however, be doing injustice to Dr Burdach and his collaborateurs, were we to leave our readers under the supposition that the volumes in question are composed merely of a succession of vague hypothesis; on the contrary, they are replete with valuable information—presenting a very fair and full exposition of the

present state of that portion of the science of which they treat; and though we cannot acquiesce in the correctness of all his doctrines, yet in several instances the author has been enabled, by sound and conclusive arguments, to set in a clear light subjects which have heretofore given rise to no little controversy.

From the very nature and extent of the work, a complete analysis, or a critical examination of it is impracticable—we shall be enabled to present only a very brief notice of its contents.

After a short introduction, in which the most judicious method of studying physiology, and the general objects to which it refers, are considered, the first volume is divided into two parts. The first of these treats of the *generators*, (zeugenden), or the agents engaged in the propagation of organized beings.

According to our author, generation is either heterogeneous or homogeneous. Heterogeneous, equivocal or spontaneous generation, is the production of organized beings which do not derive their existence from other individuals of the same nature with themselves, or, to use his own words, "it is the origination of new beings without parents—a primitive generation, or a creation."

"This species of generation is the usual mode of production of the smallest, most simple and least perfect of organized bodies—those which stand in the lowest grade of organization, and appear to be the very commencement of the organized kingdom." Sec. 7, 8. Heterogeneous generation is confined almost exclusively to the infusorii, certain of the mushroom tribe, of the conferva, and perhaps of the entozoen and parasitic animals. So far as we are able to comprehend our author, he would appear however to refer the production, originally, of all organized beings to heterogeneous generation.

The second species of generation, viz. homogeneous or propagation, "is the origination of a living being by parents, or individuals previously existing and confirming to it in organization; that is, belonging to the same species."

"Propagation," observes the author, "is to be viewed partly as the sequel of heterogeneous generation, inasmuch as the individuals produced by the latter continue their species; and partly as the exclusive mode of generation of those species of organized beings in which heterogeneous generation is now no longer to be observed, although it must be considered as having been the earliest and original mode of their production." Sec. 19.

Homogeneous generation is examined either as it occurs with or

without the intermedium of sexes. This leads to a view of all the various modes of propagation in the different species of plants and animals, including human generation, together with a description of the form and functions of the several organs of generation in the higher classes of organized beings.

The difference in the anatomical, organic and intellectual characters of the two sexes, is next considered. Menstruation, as one of the most important peculiarities of the human female, receives of course its proper share of attention. The causes of this peculiar function Dr BURDACH considers as either general or local. "Its general cause," he remarks, "is evidently to be found in the circumstance of the blood being so abundantly generated by the female system as to produce every four weeks an excess, which requires to be in this manner evacuated." This he conceives is proved, 1. By the system regaining "after each menstrual discharge its entire health and regularity, and the same weight it possessed for some time previously; now, when the system enjoys its normal strength and bulk after a loss of blood, it is evident that the amount lost must have been in excess. 2. By the menstrual discharge being more copious under those circumstances which favour sanguification, as for example a nourishing diet, a luxurious and indolent mode of life, &c. while it is less copious when the blood is diminished in quantity, from a spare and impoverished diet, long sickness, frequent bleeding, &c. 3. By the occurrence of plethoric symptoms, congestion of some internal organ, or hemorrhage whenever the menstrual discharge has been accidentally arrested. And 4. By the discharge becoming augmented when the activity of the circulation is increased by spirituous liquors, exercise, heat, excitement of the mind, and fever; while it is diminished by acids, cooling food and astringents." But upon what depends this tendency to plethora in the female system? FRIEND refers it to diminished exhalation, in consequence of which a less amount of blood is in this manner consumed. But our author is of opinion, "that its cause is to be found rather in a greater activity of the productive powers generally, and consequently of sanguification, existing in the female than in the male system; for the extent of the menstrual discharge has an immediate relation with the activity of the productive powers, and hence also with that of exhalation. When the bulk and activity of the system is directed to the development of the muscles, its *plasticity* must display itself to a less

degree in other directions; hence, the less the muscles are exercised, the more easily there occurs a luxuriant formation of the fluid mass. Menstruation is consequently more copious in the indolent than in the laborious; in those of delicate health, than in the robust; in the inhabitants of the city than in those of the country. In those accustomed to hardships and muscular exertion it is diminished even in hot climates. External warmth which favours the activity of the productive powers of the system augments also the menstrual discharge." "With the foregoing general cause there must be conjoined, however, a local cause, in order to constitute menstruation a particular function. This is the specific direction of the female *plasticity* upon the organs of generation. In consequence of the higher degree of vitality and of productive powers possessed by the uterus, menstruation takes place even under circumstances in which no general plethora can exist." "The same occurs here as in other hemorrhages. They all depend for their general cause upon an excess, and increased circulation of the blood, yet the state of irritation of the organ in which they occur is nevertheless their essential cause. Hence even in cases of poverty of the blood, and of entire repose, they may be reproduced." Sec. 166, 167.

Besides the foregoing, there are other causes, which concur in the production of this specific hemorrhage. These also are either general or local. The first, according to our author, consists in the blood of the female system possessing an excess of carbon, in consequence of the formation of chyle being more rapid than the decarbonization of the blood by respiration, or in other words, from the proportionably smaller size of the female lungs.

"The carbon being in consequence not removed from the blood in sufficient quantity, nor a sufficient amount of oxygen and of azote received, it becomes necessary that some other organ should supply the deficiency in the activity of the lungs, and consequently the menstruating uterus is to be viewed in some degree as an assistant lung, as it has been already termed by TESTA.

"The menstrual blood thus differs from that found in other parts of the system, principally in possessing a less amount of fibrine and of azote, while on the contrary it contains a greater proportion of carbon. LAVAGNA could not in fact obtain from it the least portion of fibrine. It resembles venous blood in its excess of carbon, which similarity is also evinced by its dark purple colour."

The local concurrent cause of menstruation is referred to a sup-

posed similarity in the structure of the uterus and lungs, which enables the former to supply the deficient action of the latter. This similarity we are told, consists in its presenting an extensive surface covered with mucous membrane, communicating with the atmosphere by means of a canal; and in its arteries being analogous to those of the lungs from the thickness of their coats, &c. Sec. 168, 9.

With respect to the uses of menstruation, the author considers, that independent of its assisting in the decarbonization of the blood, it constitutes the sign and condition of the female propagative function, and increases the specific susceptibility of the organs of generation; while during pregnancy and the period of suckling, the blood which would otherwise have been in this manner discharged from the uterus serves for the nutrition of the infant. Sec. 171.

The portion of the work we have been considering, concludes with a brief retrospect of the various points discussed, and a summary of the general doctrines supposed to grow out of the facts which have been detailed. The following extracts from the latter will serve as a fair specimen of the author's method of philosophising.

"The peopling of our planet with living beings can be explained only upon the supposition of the development of organized out of unorganized matter, as we still observe to take place in the instance of heterogeneous generation. Now, two extreme cases may be conceived of as possible. Either that a single species of organized beings was at first formed, which, while it propagated itself, underwent a constant development, and by the different relations which took place in its organization, became so modified, that from it arose all the different species which now exist; or that all the existing species of living beings were created at the same time, out of unorganized matter. Both suppositions, are however, alike improbable; the truth appears to lie between them. For it is observed in heterogeneous generation, that the various infusorii do not arise from one species, nor do all the species present themselves at the same time. But in general the different species make their appearance after certain periods of time, and only now and then a modified species arises from those already existing, or appears simultaneously with the others. We can therefore readily conceive that all the essentially different kinds of organization have arisen at different periods from unorganized matter, and have arrived, by a gradual development, to what they now are. The objection, that we no longer observe perfectly organized beings produced by heterogeneous generation, is of no avail: for there no longer occur many of those phenomena which formerly must have taken place. Masses of granite are no longer precipi-

tated from the sea, nor do rocks grow from those of a primitive formation. [Es schlägt sich keine granitmasse mehr aus dem Gewässer nieder, und es wachsen keine felsen aus Urgebirgsarten.] We see what the natural power of the earth now performs: what it formerly could we know only from the effects. But every thing indicates that at different periods of its existence, the earth, like an organized being, possessed different degrees of power; that its period of youth is now over, when replete with life, its productive power overflowed in an endless variety of creation: and that it now begets scarcely any thing new, but merely provides for those beings it has already produced; its generative power being thus in a great measure lost.

"Let us imagine an intelligent being, without experience as to the progress of life, or any knowledge of the process of generation, to behold for the first time an aged pair of human beings surrounded by children advanced to maturity;—he would be unable to understand that the latter had formerly constituted a part of the first, and had been formed by them. It is the same with respect to our planet; we and our forefathers, for centuries, have only seen it in its old age, and hence have no right to conclude, that because it is now unable to generate men, it has never possessed the power. But if some cannot admit that man originated in this manner, in consequence of his perfect organization, we reply, that even the mushroom which we now see produced from the earth through heterogeneous generation, presents an elaborate organization, comprising within itself numerous parts in perfect harmony with each other. The infusorii, also, which without the existence of parents are produced before our eyes, possess an internal life, sensation and will. Now if the earth, even in its advanced age, is capable of producing so elaborate and complete an organization, may it not in its youth have had the power to form an organized being, such as man? It is more than probable also that man was not at first the perfect being he now is, but that the human organization became gradually unfolded, its original capacities being thus in the course of time fully developed." Sec. 226.

We have read in ancient story, of a whole army springing forth from the earth, completely accoutred for action, and of course possessed of all the necessary knowledge of military tactics; this we presume took place when our planet was in possession of her fullest vigour. Even long before that peroid, when every standing pool must have given forth, as its most ordinary productions, giants, mammoths and leviathans, beings that have become extinct, merely from the circumstances, we conclude, of the bosom of their common mother being incapable, during the period of her decrepitude, when the mightiest effort of her creative power was reduced to the organi-

zation of a mite or a mushroom, of affording them sufficient nutriment for the support of their stupendous frames.

"The foundation of every species of generation," says Dr BURDACH, "is the external *ideal* power which displays itself in the organization of the world, and by simply repeating in the parts what it creates in the whole, calls forth every where living beings. It acts agreeably to eternal laws, which are identical with it, and whose existence is known only from their effects. Generation is effected therefore by the general power of nature, to which inanimate matter serves as the agent by which it calls forth life: life, however, of a common or inferior kind; the germ only of a higher species of existence. When this germ becomes developed, propagation then takes place by the power of the species, operating in living individuals: and as it constantly raises itself more and more above individuality, it becomes always more dynamic and spiritual, producing likewise a more perfect species of life, which finally becomes adapted to the contemplation of the universe and of its eternal cause. But when that species of life is to be called forth, in which the complex and harmonious operations of the universe are repeated as it were upon a reduced scale, it can no longer be effected by an individual, but requires the concurrence of two, who render each other perfect, and in their reciprocal influence present a dynamic, *ideal* whole. Their junction however is effected by means of a common seed." Sec. 232.

According to our author, the original or female, and most essential agent in the primitive generation is water. Solid matter, which is of later formation, and produced from a fluid, performs but a mediate part in the process of generation; it is either dissolved in the water, or without alteration of form contributes to the production of the infusorii. There is, he remarks, a perfect resemblance between generation and nutrition. We observe that in the lower grades of organization, nutrition is extremely simple and that life is readily supported by water and unorganized matter. On the contrary, when a higher degree of organization is developed, the plastic power is weaker, and for nourishment, solid substances that have already been possessed of life become necessary.

"Now as the productive power of the planet, was formerly more effective than it now is, there is reason to believe that the primitive generation took place, at an earlier period, by means of an inorganic precipitation from water, [durch unorganische niederschläge aus dem wasser] while it now can occur only when substances which have already been possessed of life are infused in the water." Sec. 232.

Similar hypotheses with those enunciated in the paragraphs we have just quoted fill many pages of the work. They are so purely

speculative, that even had they been supported by a series of ingenious and plausible arguments, we should not conceive ourselves called upon to attempt their refutation. In many instances, their prototypes are to be found in the dreams of the ancient philosophers.

The concluding part of the present volume is occupied with a consideration of the act of generation, (zeugen) or impregnation.

The second volume is divided into three parts. The first treats of the ovum, the second of the embryo, and the third of the life and development of the fœtus.

With a concise sketch of our author's views upon each of these important subjects, we might very profitably occupy several pages of our review; this, however, the limits to which we are restricted will not admit. We shall confine ourselves, therefore, to his account of the formation and functions of the placenta.

According to Dr B. the fœtal portion of the placenta, or as he terms it, the fœtal placenta (fruchtkuchen,) is composed of the ramifications of the vessels of the chord, of the floculi of the exochorion, which form for the former a kind of sheath, and of a considerable amount of cellular membrane.

"The two arteries of the chord diverge slightly before they reach the placenta, and commonly communicate with each other, previously to entering into its substance, by means of a transverse branch. They never proceed in the direction of the chord, but radiate in branches upon the inner surface of the placenta, dividing into minute ramifications only within its structure. The same is true, also, of the veins. An arterial branch enters into each of the floculi of the exochorion, ramifies through its branches, and terminates by a bend, at its point, into the corresponding vein. Hence, as Wrisberg and Lobstein have remarked, an artery and vein always accompany each other, and are connected together, even to the smallest ramifications; here, however, so far as it regards the thickness of their coats, there is no longer any difference to be observed between the two vessels.

"The ramifications of each pair of vessels, with those of its corresponding floculus, being connected together by cellular membrane, form a distinct lobe or cotyledon, the vessels of which have no communication with those of the neighbouring lobes.

"The termination of the artery of each lobe into the corresponding vein is direct, and without the interposition of a cell, as is proved by injections. According to Moreschi, he was unable to pass injections from the one vessel into the other, and hence he denies their immediate connection; his failure must, however, have arisen from particular circumstances."

The maternal portion of the placenta, (mutterkuchen) is produced by that portion of the decidua which is first in immediate contact with the ovum on its entrance into the uterus. In consequence of an increased vascular action taking place at this part, about the end of the second month an albuminous layer is secreted, as the foundation of the maternal placenta; this becomes hardened, and about the end of the third month, the vessels of the uterus shoot into it. These vessels are about a line in diameter, and terminate, without much ramification, into enlargements or cells, from which the veins arise. By the fourth or fifth month the maternal placenta has become cellular and forms an uneven surface, by which it penetrates into the indentations which exist in the fœtal portion, while it receives the lobes of the latter. The two portions are at first only loosely connected with each other, and can be readily separated by maceration, but afterwards the union becomes more intimate.

"There does not exist any connection between the fœtal and maternal placentæ, by means of vessels passing immediately from the one to the other. This is rendered evident by an anatomical examination. Fine injections thrown into the chord, pass without extravasation, no farther than the fœtal placenta, and those thrown into the vessels of the uterus, only into the maternal. This was the result of repeated experiments made by WRISBERG,* REUSS†, HUNTER‡, ROUX§, TIEDEMANN‖, DOLLINGER¶, MECKEL**, LAUTH††, and others. LOBSTEIN speaks of cells between the maternal and fœtal portions of the placenta, into which the blood is poured; but no such cells exist: what has been mistaken for them is produced solely by the tearing asunder of the two portions; see LAUTH. REUSS supposes that vessels pass between the fœtal and maternal placenta, provided with valves, some of which proceed from the former into the vessels of the latter, and others from the latter into the vessels of the former; while LAUTH speaks of a peculiar set of absorbents, some of which communicate between the arteries of the fœtal and the veins of the maternal placenta, and others in an opposite direction. It is certain that a kind of valvular appearance may occasionally be observed, and is probably produced by the convolution of the vessels.

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* Comment. Medici, Physiol. Anatom. et Obstet. Argumenti. Gotting. 1800.
† Observ. circa Struct. Vasorum in Placenta Humana, &c. Tubing. 1784.
‡ Anatomical Description of the Pregnant Uterus.
§ Traité d'Anatomie. Par BICHAT, 1803.
‖ Anatomie der Kopflosen Missgeburten, 1813.
¶ Meckel's Deutsches Arch. f. d. Physiologie. Band VI.
** Handbuch der Menschl. Anat. Band IV.
†† Repert. Général d'Anatomie et de Physiologie Patholog. &c. 1826.

"In a few instances, fluids have undoubtedly been passed from the vessels of one portion of the placenta into those of the other. Chaussier and Beclard were able to inject quicksilver from the veins of the chord into those of the uterus, but not from the arteries. It is evident, however, that the veins of the two placentæ can have no direct communication with each other, as the blood flows in them in opposite directions: it is more probable that in these experiments the quicksilver found its way through the lax coats of the two sets of veins, which could easily have occurred. David Williams states that he even injected after death linseed oil into the descending aorta of a pregnant bitch, and subsequently detected it in the chord and blood of the embryo. But the history of injections sufficiently proves that fluids frequently pass by simple transudation, from one set of vessels into another, as from arteries into absorbents.

" Still more decidedly do the phenomena which occur during life contradict the existence of a direct communication between the two sides of the placenta. Thus no hemorrhage takes place from the placenta when separated. Roderer and Osiander observed, in an infant born with the placenta, the chord being undivided, the circulation continue through the latter for fifteen minutes, without hemorrhage. After the separation of the child, subsequent to birth, the placenta being still attached to the uterus, the pulsation in the portion of the chord appertaining to the latter, ceases, and no hemorrhage takes place. The pulsation of the fœtal arteries has a totally different rhythm from those of the mother, and according to Prevost and Dumas, the globules of blood of the former have a form differing from those of the latter. When the mother has died from hemorrhage, the vessels of the uterus have been found empty, while those of the placenta and fœtus contained still the ordinary amount of blood. Wrisberg observed the same in numerous animals that he bled to death. On the other hand, however, it is true that by a premature separation of the placenta, with rupture of its vessels, the fœtus may perish from hemorrhage."

According to our author, as the fœtus approaches its period of maturity the vital harmony which had existed between the two portions of the placenta ceases. After the ninth lunar month it grows less rapidly, becomes smaller in proportion to the size of the fœtus and contains less blood, a part of its vessels becoming dry and converted into whitish chords; the latter Dr Burdach presumes may have been mistaken by some for absorbents or nerves. Its connexion with the uterus becomes also less intimate. According to Carus, in the tenth lunar month, there is formed upon its outer surface a thin cuticular covering destitute of vessels, by which its

separation from the uterus is facilitated. This Dr BURDACH suspects, however, to be the degenerated maternal placenta. Sec. 447.

The much disputed question as to the function of the placenta comes next under consideration. The author rejects the ordinary doctrine, that the fœtus derives its blood from the mother through the medium of the placenta, or that the latter contributes in any considerable degree towards its nutrition. He has attempted to show, by arguments in our opinion not easily controverted, that the fœtus fabricates its own blood, from materials principally absorbed by its surface, and that the placenta serves the same purposes in the fœtal economy that the lungs do after birth. We shall be obliged to pass by the facts and reasoning upon which this opinion is founded, affording room only for a brief notice of the manner in which the change in the fœtal blood is supposed to be effected.

As the fœtal placenta is in immediate contact with the maternal, to which it intimately adheres, no space remains between the two in which a gas could be contained, and as no trace of the latter is found in the substance of the organ, it is hence concluded that the change in the blood contained in the vessels of the fœtal placenta is produced by the influence of the blood in those of the maternal portion; the two sets of vessels being in immediate contact. "It is hence," remarks Dr BURDACH, "to be compared to the respiration of a fluid, and the placenta to gills."

The surfaces of the two placentæ, which adhere to each other, are supposed to represent two electrical plates, producing in the two kinds of blood a decomposition with reciprocal exchange of materials: the fœtal blood not only deriving an addition of oxygen from the uterine blood in the cells of the maternal placenta, but losing a portion of carbonic acid, which is taken up by the roots of the uterine veins. "We have no reason for presuming," says Dr BURDACH, "that this is effected by means of a fluid first absorbed from the maternal blood, as imagined by MAYOW. The fluid referred to by him is found in the human subject during only a short period of gestation, and appears rather to serve for the nourishment of the fœtus by its passage into the umbilical chord."

MULLER considers the supposition of the fœtal blood being deprived of carbon in the placenta as improbable, referring this decarbonization solely to the liver. The receipt of oxygen and loss of carbon are, however, so intimately connected that it is not very probable one can take place and not the other. Dr BURDACH con-

ceives that the separation of a carbonaceous matter by the placenta is rendered evident by the fact, that "in carnivorous animals a humour is deposited at the edges of its fœtal portion, at first of a dark brown, but subsequently of a dark green colour, which has a striking similarity with the bile."

The change in the fœtal blood effected by the placenta is less perfect than that which the blood undergoes in the lungs after birth. According to the observations of SCHUTZ and MULLER the blood in the umbilical vein is not so dark as the venous blood of the mother, nor yet of so bright a red as her arterial blood. In addition to which this blood is mixed in the inferior cava, with the purely venous blood returning from the lower parts of the body: it becomes, therefore, necessary that the change should be perfected by other organs, as the liver, &c.

"The lower portion of the fœtal body receives only that blood which has already circulated through the upper portion, and which therefore is less adapted for nutrition and the support of life. With this blood is mixed, as is well known, the blood returned from the thymus gland through the internal thoracic, the clavicular and thyroid veins, or immediately into the superior cava; it is, therefore, presumable that this gland, by the formation of a milky fluid from the blood, deprives the latter of so much carbonaceous matter as to adapt it for the nourishment and vital support of the parts to which it is distributed. The thyroid gland may likewise perhaps assist in effecting this change; so that these two organs in connexion may perform for the blood of the inferior portion of the fœtal system the same office as the placenta and liver do for that of the superior portion." Sec. 467.

The foregoing paragraphs may be considered to represent, not merely the opinions of Dr BURDACH, and the individuals connected with him in the present work, but those also of a numerous and respectable class of German physiologists: the system under review being referred to, in the recent publications of the latter country, as a standard authority.

The doctrines advanced can certainly lay no claim to originality. The aeration of the fœtal blood by the placenta was taught almost a century since by Sir EDWARD HULSE; while the question of a direct or indirect connexion between the fœtal and maternal vessels is amply discussed in the communications of GIBSON and MONRO, contained in the two first volumes of the Edinburgh Medical Essays.

Although it is now very generally admitted that the fœtal and

maternal vessels have no immediate communication, yet it is still believed that the fœtus derives its blood solely from that of the mother, through the medium of the placenta; a doctrine which, to say the least, is rendered doubtful, by many well established facts. The subject is deserving of more minute investigation.

The space we have already occupied will not permit us to notice the opinions of the author in regard to the nutrition of the fœtus—nor his ingenious but in some respects whimsical doctrine of sexual generation.

In taking leave of the work for the present, we can with much sincerity recommend it, in reference to the mass of facts it contains, as one in the highest degree interesting not merely to the physician but to the student of nature generally: it will undoubtedly form a valuable acquisition to the libraries of both.

ARTICLE VII.—*Acta Nova Regiæ Societatis Medicæ Havniensis. Volumen III. Copenhagen*, 1829, 8*vo*. *Pp.* 290. *Plates.*

The republic of letters nowhere exhibits the character of a commonwealth more clearly than in its departments of the medical sciences; the weal of the whole profession seems to be imprescriptible, and arises clearly out of the very nature of the establishment, like the common rights of life, liberty and happiness, which ought not to be brought even in question in any civil polity: hence it is, that the experience, the skill, the invention, the discoveries in medicine, no matter where they may be found, are so soon made common property, and rendered available for the uses of suffering humanity in all countries under the sun; and hence the recent Transactions of the Royal Medical Society of Copenhagen have come, in obedience to the fundamental laws of the republic of letters, to diffuse in this distant land the light and knowledge, which, as they are the common object of desire, are thus shown to be of no country, no nation, nor kindred.

This learned society, which has but few foreign members, has selected out of our American physicians a very considerable number

for that honour; (one tenth) if compared with the whole catalogue. We cannot refuse ourselves the pleasure of naming those who have been selected for this distinction. They are Dr PHYSICK, Dr COXE, Dr CHAPMAN, Dr GIBSON, the well known professors in the university of Pennsylvania, and Dr S. L. MITCHELL of New York. It is a source of satisfaction to find that our countrymen, who are so well entitled to public honours, are not wholly neglected among the crowds of distinguished men, whose names are familiarly pronounced in every country of Europe.

The volume of Copenhagen Transactions consists of nineteen communications, from MM. BANG, RAHLFF, LUND, THAL, OTTO, SVENDSEN, LIND, LUNDING, MULLER, HJORTH, MIKISCH, WENDELBOE, HOWITZ, KLINGBERG, WITHUSEN and MANSA. Many of these are highly interesting, and it would give us great pleasure to lay before our readers a summary of the several papers; but as want of space forbids us that gratification, we will at least select from some one of them.

In our own journal, Vol. VI. p. 37, there is contained an excellent paper by Dr REYNELL COATES on the hereditary disposition to hemorrhage which so singularly distinguishes some persons, and as the fourth article in the Copenhagen Transactions is a paper by M. R. S. THAL, relating a case of hereditary disposition to hemorrhage from slight wounds, of a highly interesting nature, confirmatory and illustrative of the disease treated by Dr COATES, we shall select that one for our journal.

The patient, a tailor of Holbeck, was a stout hardy fellow, but of a lecophlegmatico-cachectic habit. He was affected with a swelling of the scrotum, occasioned by urinary infiltration that had been produced by some fistulous openings of the urethra.

The penis was also swelled; and the prepuce particularly was so much so, as to render an operation requisite in the progress of the cure. This operation, performed November the 8th, 1827, consisted of circumcision, in which two very small arteries were divided, one on the left side of the frænum, and the other on the margin of the prepuce; they were both tied; the bleeding was further restrained by agaric compresses and a roller. This was completed about nine o'clock in the forenoon; but at twelve o'clock a most violent secondary hemorrhage, such as Dr THAL never before witnessed from so small a wound, took place. The blood did not flow from a single

artery, but from the whole cut surface ; and so rapidly, that in a very short time both the groins, the abdomen, and the space between the thighs were covered and filled with coagulated blood. The pulse was as yet unchanged, and the patient, not in the least alarmed, in a very quiet manner informed me, that " the hemorrhage will last as long as there is a drop of blood in me, and when the wound purifies I shall get well." He also related many other particulars to the physician, which will be presently mentioned. Having in vain tried the effect of burnt alum, and sulphate of zinc, as well as an actual cautery, so hot that it emitted sparks, (*white heat*), Dr THAL introduced a piece of flexible catheter, into the urethra, and then covering the wound with agaric, bound it firmly up with rollers of adhesive plaster. This appeared to produce the desired effect ; perhaps because the patient had already lost a great deal of blood and had used a great deal of cold water and admitted air very freely, so that he was quite chilled. At about nine o'clock the same evening the hemorrhage recurred, but with less violence, and was restrained. It recurred again at ten o'clock the next morning, and at different times, amounting in all to twelve repetitions, on the 9th of December, until the prepuce, (cutis), completely sphacelated as far down as the root of the penis, where there was a large and indurated cicatrix, separated by suppuration. The skin of the scrotum afterwards served by a natural process to cover the penis anew, the fistulous openings of the urethra closed, and the patient again recovered the power of passing his water per vias naturales. It is needless to repeat that he was weak, exanguious and low,—he recovered, so that, on the 7th of January 1828, he left the hospital cured.

The patient (Guldbrand Olsen) was born in 1794, the youngest of four brothers ; could give no account of the pathological predispositions of his father and mother, who both died while he was young. Two of his brothers had the hereditary predisposition to hemorrhage, and died at an early age ; the patient was uncertain whether they died with hemorrhage or not. When he was twelve years old he mashed his finger nail and bled for eight days, until deliquium animi took place, but upon the occurrence of suppuration with a putrid smell, the flow ceased and he recovered. He had been often afflicted with violent epistaxis, difficult to restrain, both before and after this accident.

A few years after this, having received a blow on his head which occasioned a sugillation, the tumour in a few days having become very black and dense, burst open, and was followed by a severe and exhausting hemorrhage. The ulcer healed rapidly.

In 1807 he wounded the sole of his foot with a sickle, and was greatly debilitated by the bleeding, but the ulcer healed readily. He afterwards sustained a great hemorrhage from the extraction of a rotten tooth.

While exercising his trade as a tailor, he often pricked himself with his needle without any ill consequences. In 1810 he bruised the end of his left thumb, and having endeavoured to restrain the bleeding by compression, the thumb and whole hand became black, and swelled so as to make it necessary to lay aside the compression. The bleeding returned, but ceased when he had become extremely debilitated.

In 1817 he fell from a horse, and soon there appeared over the symphysis pubis a black dense tumour, as large as one's fist; he was taken to the hospital of Christiana, where, in consequence of an incision made for the purpose of opening the tumour, he was seized with a very great hemorrhage. For twenty-four hours the blood flowed incessantly; the wound being then cleaned out and filled with lint, compression was resorted to with the usual result of occasioning swelling, blackness of the parts, and at last a rupture of the tissues near the incision, which, after the escape of a great quantity of putrid blood mixed with recent blood, began to suppurate and then to heal, which occasioned the cicatrix which we before described as limiting the mortification of the penis. After this he married and had three children, the second of which suffers with the same hemorrhagic predisposition as its parent.

We have been led by the powerful interest of Dr Thal's paper to extend this notice to what may perhaps be regarded as an unreasonable length for such an article. There are other papers in the Copenhagen Transactions of equal merit and interest; we must take no farther notice of them than to remark that we are happy to find that diligent cultivators of medical science are not confined to any soil or climate.

ARTICLE VIII.—*Manual for the Use of the Stethescope. A short Treatise on the different methods of investigating the Diseases of the Chest. Translated from the French of* M. COLLIN. *By* W. N. RYLAND, M.D. *From the third London edition, with plates, and an explanatory introduction by a Fellow of the Massachusetts Medical Society, Boston. Perkins & Co.* 1829. 12*mo. Pp.* 136, *and* 4 *plates.*

We are heartily glad to see an edition of M. COLLIN's little but useful work published in our country, and are willing cheerfully to contribute what lies in our power to its further circulation. We hope it may serve to disseminate throughout the country such a knowledge of the utility of M. LAENNEC's mode of investigating, as may shortly lead to and repay the expense of a translation of his own invaluable work, not abridged, but in the whole of its very moderate length. In the mean while, feeling the deficiency that exists of adequate sources of information on this subject, we shall take the present occasion to furnish a little sketch or outline of some of the principles of the *physical examination of the diseases of the lungs.* Those of the heart, which are included in the same inquiries, are treated of in a review designed for insertion in our next number; it will therefore be unnecessary to speak of them here. This arrangement will, in addition, leave our present article more unity of character; and what we have to say in particular upon the work before us, may come in at the end, as our principal object is to present a small abstract.

There have been in various countries and ages two leading modes of examining patients, with a view to detecting and identifying diseases, previously to undertaking to relieve them. These have been, with considerable propriety, distinguished as the *physiological* and *physical.* The one consists in observing and comparing those symptoms of which the patient complains, or which the physician can gather by asking him questions, or observing his attitudes and the expression of his countenance. As these consist in pain, and in other deviations from the healthy actions of parts, they are properly recognized as falling within the domain of physiology. They possess this strong recommendation, that they are in fact a portion of the disease itself, as the latter consists in de-

ranged actions, and the above symptoms are a part of the catalogue. On the other hand, it may be said in disparagement of their value and usefulness, that they are vague and uncertain; that the same inconveniences frequently result from the most dissimilar affections; that many of them are common to the great majority of diseases known; that others are unknown to the patient, and are rarely detected unless previously the objects of suspicion on the part of the medical attendant; and finally, that the healthy physiological state, with its natural sympathies, is itself too imperfectly known to us to admit of a just appreciation of the extent of its morbid changes, or of the value of these as medical indications.

Physical signs, on the contrary, consisting in changes of structure, arrangement, density, or size of parts, possess much of that peculiar certainty which is ascribed to the mathematical sciences. They are in general simple facts, addressed to the senses of the practitioner, who is presumed to be in health, instead of the diseased powers of the patient. Being immediately observed in the affected parts too, they by this means avoid the uncertainty and obscurity of the laws which govern sympathy. Any one who possesses the ordinary acuteness and exactness of the organs of sense is capable, after an adequate study of the subject, of ascertaining the existence and extent of physical phenomena with a degree of satisfaction in his own deductions which the practitioner, in other departments of his science, rarely enjoys. When "subjected," as the critic expresses it, "to the faithful eyes," the condition of a diseased part is universally felt to be far more distinctly and satisfactorily known than when hesitatingly conjectured from the changeable sympathies of remote parts. Hence, the physician, however he may have been bewildered in his study of the symptoms, never doubts the certainty of what is displayed before his eyes by a dissection after death. It is this advantage too, a comfort felt by every practitioner, but in a particular manner by the more solicitous minds, that has furnished to so many the peculiar charm of the practice of surgery. "In surgery," it is exclaimed, "we do not meet with an obscure, vague and conjectural diagnosis; we are not divided in fluttering uncertainty by a mass of ambiguous symptoms, but decide by actual inspection of the malady. The disease itself, as in the instance of external wounds and inflammations, lies fairly displayed to the eyes; we see distinctly its nature and extent, and are ocular witnesses of its augmentation, decline and final extinc-

tion. Far different is this science of visible and tangible objects from that in which we obscurely and by guess work endeavour to fathom the recesses of the viscera, or as in the case of fevers, to decide among arbitrary and changing classifications of mortal disease, guided by the symptoms alone, and grasping at general resemblances and ideal distinctions, without being able to assign to our destructive adversary any definable situation or shape. We give to the terrific destroyer of human life no 'local habitation,' while we are but too prone to deck the 'airy nothings' of our fancy with 'a name.'"

The student who opens for the first time one of our common works on the practice of physic, finds but too much truth in the above reproachful picture. As he enters the bewildering maze of symptoms and descriptions given in Thomas's Practice, the first sensation experienced by him is generally one almost amounting to despair; to a feeling of the utter impossibility of ever being able to load his memory, in sufficient promptitude for daily use, with the means of discriminating what is so obscurely and vaguely classified, and to decide upon the proper course to be pursued among such a list of various and discordant modes of practice. He finds pleurisy and pneumonia under the head of inflammations; hemoptysis, (a symptom which so often accompanies the two last), some hundred and thirty pages off, in the department of hemorrhages; catarrh among the profluvia along side of dysentery; whooping cough between *hiccup* and pyrosis, and asthma between *palpitations* and hydrophobia! all under the title spasmi; while pulmonary consumption is among the cachexiæ, along with chronic aphthæ, polysarcia, hydatids, elephantiasis and jaundice!! Thus the disease is in one class, and the symptom in another; while, to find a collateral and uniformly fatal malady, the reader is obliged to skip from emaciation to excessive corpulence, and from trifles to mortality. Yet he knows, or, if he do not, practice will speedily show him, that these diseases of which we have sent him in search, are all analogous, liable to be mistaken the one for the other, frequently combined together, and occasionally by human means absolutely indistinguishable. These embarrassments and this confusion are the legitimate result of a system which investigates and describes diseases by the physiological symptoms alone, and that in minds of no ordinary magnitude; such being, for example, that of the celebrated Cullen. Classifications drawn from physical examination

generally follow the morbid appearances observed after death. These, as in the hands of MORGAGNI, by no means present the same appearance of artificial and methodical arrangement; copying in this respect the irregularities of nature. They however possess this great advantage, that they class diseases of the same organs together; and by this means avoid the strange and incongruous arrangements which we have exemplified above. The diseases of the chest, in the writings of the anatomists, immediately follow one another; the reader is enabled to proceed from the one to the other while his memory is still fresh; and the points of comparison thus afforded serve to assist his recollection and to stimulate his flagging curiosity.

Of this class is the work of LAENNEC. Having selected for the subject of his inquiries a new mode of investigation, adapted in a peculiar manner to the diseases of the chest, and having possessed opportunities for making a vast number of dissections, as a sequel to his previous attendance on the same individuals thus subjected to his autopsic researches, he was led into a very full and detailed inquiry into the affections of the lungs and heart, considered anatomically. His work thus becomes, in a double point of view, a truly invaluable treasure. As, however, the subject of the physical means of investigating the diseases of the lungs is abundantly sufficient to occupy our space, and perhaps enough to task at one time the attention of our readers, we shall postpone the anatomical part of the subject to some future occasion. Of the diagnostic means discovered mainly by this author, the present would perhaps be the proper place to give a systematic view, as much in detail as the limits of an article like this would allow; but as we have already given an abstract with definitions of the terms, in reviewing the Dublin Hospital Reports in a former number*, we shall in consequence confine ourselves to some general views, and to supplying some of the lacunæ of our preceding article.

The first step in a complete physical examination of a disease of the lungs, is the direct *inspection* of the external surface of the thorax; a thing strongly to be recommended in all serious cases, where propriety admits of its performance. In the female sex this is obviously impracticable; yet an approximation to it may be had by examining the thorax through a light dress closely applied to its

* Vol. V. pp. 85, 98.

surface, and by inspecting the neck. The utility of this inspection, independently of the subsequent use of the stethescope or of percussion, is much greater than the practitioner might generally suppose. Various distortions of the chest, indicative of serious disease, are occasionally thus discovered. In the two last numbers of this Journal are mentioned cases, in one of which the patient had been treated for asthma by a practitioner of high and unquestioned respectability; when, upon the accidental exposure of his person, the symptoms were found to arise from a large aneurismal tumour, situated at the root of the arteria innominata. In the other case, a slight projection of the upper bone of the sternum, noticed on stripping the corpse, was found to be produced by a large aneurism of the arch of the aorta. Many other cases might be easily cited in confirmation of the importance of inspection. After giving the thorax a preliminary inspection, care is next to be taken to ascertain whether all its parts and both its sides expand and contract equally during respiration; for which purpose the patient must make deep inspirations. In doing this, *pain* is frequently detected, which had never before attracted the particular attention of the patient. It is also necessary to note the celerity and the rhythm of the movements of respiration. These are, in fact, physiological signs, as they depend upon the actions of parts; but they are properly included in our present inquiry, because they afford a good clue, in many instances, to the real physical condition. Increased rapidity of the motions performed in breathing, the atmosphere being the same, denotes an increased aeration of the blood, or a diminution of the space in which this is performed. The first of these arises from muscular exertion, and from inflammatory diseases producing fever; the latter from a diseased condition of a considerable portion of the lungs, the presence of fluid, &c. What is called *high* respiration, or that in which the thorax is always more distended than common, arises from the presence of tumours or fluid, from inflammation or some other cause rendering it painful to contract the thorax, from the distended stomach or liver being protruded upwards from the abdomen, as in ascites, &c., or from an enlargement of the lungs themselves, as by emphysema. When the pleura is painfully inflamed, and adherence commencing, it is painful to enlarge the thorax; hence the short, quick inspiration, and slow expiration of pleurisy. When, on the other hand, acute pneumonia exists, a por-

tion of the lung is painfully compressed whenever the thorax contracts; and the expiration is then short and interrupted, while the inspiration is prolonged. This also tends to generate a high respiration, or that in which the thorax is highly distended. The long, deep, slow respiration depends on the state of the nervous system, particularly the brain.

Any peculiarity of the visible pulsations of the *heart* is next to be noticed; and any perceptible *inequality* of the two sides of the thorax. *Measurement* by a tape will exhibit this last fact with far more certainty and accuracy; but it is not necessary to resort to this test, unless either a striking inequality be perceived by the eye, or some peculiarities be ascertained by percussion or the stethescope, which call for such further investigation.

In judging of the organic situation of the pain, from the locality pointed out by the patient, we apprehend error is not unfrequently committed. The ordinary complaint, that an individual has pain "in his breast" or "in his stomach," is sometimes, we fear, received as correct, without taking into consideration the ignorance of anatomy to be expected in the majority of patients; in whose vocabulary "breast" frequently means stomach, and "stomach" small intestines, while in the female sex, "side" frequently means the region of the ovaria. When pain, said to be in the breast, is accompanied by cough, we have known many practitioners, (among whom, previously to our study of the French morbid anatomists, we class ourselves), to take up the general presumption that the disease was pulmonary. It is well known, and we believe universally acknowledged, that a part of these are "stomach cases;" and since the study of the organic medicine has directed our attention more minutely to localities, we are convinced that it is very frequently the case. Ask the fever patient who is affected with a short, dry, but troublesome cough, in what part of the body he feels soreness, and he will frequently reply "in his breast;" while, if desired to place his hand on the spot, he points out the stomach. To judge of this point with accuracy, it is necessary to recollect that the lower edge of the cartilages of the ribs is far from being the real termination of the thoracic cavity during any of the ordinary states of respiration. The obscurity which reigns in the common ideas of the mechanism of respiration, may be judged of by perusing the article on this subject in MAGENDIE's Physiology; to which we will add the annunciation, a few years since, in England, as a discovery, that the

lungs did not extend to the line above alluded to, and that punctured wounds for a short distance above that line would consequently wound those organs. The fact is that the bony and cartilaginous frame work of the thorax, in addition to the lungs, heart, and great vessels, also contains the larger part of the stomach under the most ordinary circumstances of distension, the duodenum, the liver, and a portion of the spleen. The tendinous centre of the diaphragm we should place about upon a level with the seventh rib, counting along the middle line of the side. To near this height the liver lies pressing the diaphragm into so close contact with the ribs, that the sound given by percussion with the pleximeter is entirely dead; and this indication is confirmed by our finding, after death, that no part of the lungs intervenes between them. We speak, of course, of cases in which the lungs are preternaturally augmented in size. On the left side, the stomach ascends to a considerable height; but this is diminished by the thin left edge of the liver lying over the stomach, and by these parts not pressing the diaphragm so closely against the ribs.

Not only may the pain felt within the cavity of the thorax, either while at rest or on performing a deep inspiration, be situated in any one of the organs here enumerated, but the irritation which is the cause of the *cough* may have the same variety in its locality. As has been remarked by Dr Bree, in his work on asthma, cough may arise from irritation in any of the parts upon which it is intended by nature that the diaphragm should exert its action; and this is particularly and frequently the case with the contents of the abdominal cavity. Hence the numerous but ill defined cases of "stomach" and "liver cough" of the English practitioners, and the symptomatic cough pointed out by professor Broussais in acute and chronic gastro-enteritis. We apprehend, from the observations we have made during the last two years, and from comparing them with the experience and doctrines of preceding periods of time, that numerous cases go through the whole of their treatment, and come to a final termination, while the medical attendant supposes the disease to be at least in part pulmonic, although the real cause of the symptoms lies in the abdomen.

Success in the treatment, viz. the patient's recovery, is not a conclusive proof of the correctness of the physician's diagnosis; as the general remedies are principally the same under both suppositions, and the local applications are frequently applied, with correctness

enough, according to the patient's sensations of the spot in which he feels pain. We have repeatedly seen cups and blisters, which had been directed to be applied to the breast, leave traces of their activity upon the epigastrium, contrary to the physician's intention, but with the greatest relief to his patients. From this, and similar instances, the question has even been started, whether any useful results be derived from an accurate anatomical knowledge of the situation of a disease, provided the spot where uneasiness is felt be pointed out, and the local remedies applied there; and whether it make any difference, in applying leeches or a blister, whether the inflamed part beneath be of a serous, mucous, or parenchymatous texture. To follow this subject out would lead us too far, and we will content ourselves with observing that there is a partial foundation for these queries; and that it is undoubtedly better, in pressing emergencies, to prescribe for inflammation those remedies which we know are calculated to relieve it, rather than waste precious time in waiting to learn the exact texture affected; but that, notwithstanding, in physician's prescriptions, as well as other things, the doctrine humorously expressed by the satirist continues to be true and applicable, "that a man will write the better on a subject for knowing something about it." It is not to be supposed, certainly, that any disadvantage can arise from knowing as accurately as possible the exact extent and situation of a disease; or that experience in the use of remedies will not be improved, or has not been already improved, by increased precision in distinguishing diseases.

After a general examination of the external appearance of the thorax, the remaining modes of inquiry may be divided into the examination of the sputa, percussion, auscultation, mensuration and the Hippocratic succussion. These modes of investigation are not to be considered, as is sometimes the case, in the light of so many competitors for the preference of the physician. No one of these can supersede another, at least in all cases; and they are all necessary to a complete system of investigation; one of them filling up the deficiencies of the others, sometimes in a manner surprisingly appropriate.

The observer would do well to begin, generally, by examining the matters expectorated. If these are limpid and viscid, without at the same time assuming any extreme toughness, they indicate acute catarrh or bronchitis. If, subsequently to this, they become opaque, white, yellow, or greenish, this indicates the decline of the

acute disease, or the presence of the chronic form. If the sputa are so tough and adhesive as to remain attached to the side of the vessel when inverted, particularly if they are at the same time streaked with blood, they indicate pneumonia. If round, whitish, opaque masses float in a frothy fluid, or if a puriform fluid is discharged, streaked with white lines, and containing small white masses, insoluble in water, they are probably the produce of a tubercular excavation. It should be recollected that these last are complicated with the symptoms of chronic or acute catarrh; and that pulmonary consumption in its incipient stage produces no other sputa than those which characterise catarrh. The expectoration from tubercular cavities is suddenly discharged in quantities more or less considerable from the opening of new vomicæ. If the quantity be very large, and of a thin purulent form, the presumption is in favour of a fluid contained in the pleura having suddenly forced its way through a tubercular excavation, and become discharged by the bronchia. This terrific complication has been demonstrated by M. Laennec not to be absolutely beyond the possibility of permitting prolonged life. When pieces of false membrane are coughed up, this demonstrates the existence of membranous croup. When the discharges are dark green or black, exhaling a distressing fœtor, the patient is suffering from gangrene of the lungs. The discharge of blood is not equally distinct in its indications. Care must be taken to distinguish it from that discharged from the stomach, as well as that furnished by the nares and mouth. Blood from the lungs is of a bright arterial red, frothy, and generally mixed, unless in extremely large quantity, with other sputa. It is discharged by coughing, and not by vomiting. This distinction is sometimes overlooked by patients from the circumstance that very copious discharges by coughing occasionally produce vomiting. When blood is discharged by coughing, in minute streaks mixed with mucus, it is very frequently simply thrown out by the inflamed mucous surface in catarrh or in pneumonia. When mixed with the sudden tubercular discharges mentioned above, it generally proceeds from the rupture of small vessels which run across the spot where the vomica has burst. When copious, hæmoptysis is often produced by the disease called by M. Laennec apoplexy of the lungs; which must be carefully distinguished from the congested state of those organs frequently known by the same name in this country. If a profuse hemorrhage suddenly take place in a patient affected with

tubercular cavities, this is very probably by the rupture of an arterial branch of some size discharging its contents into the tubercular cavity.

After examining the sputa, it is generally most convenient, the next in order, to make use of percussion, as this process frequently affords the most useful guide in the application of the stethescope.

We have so recently and so fully reviewed the work of M. PIORRY on the mode of making percussion by means of his circular ivory plate or pleximeter, (see last number), that we may be well excused from a recapitulation of that subject. The use of this instrument has not been incorporated in any code of instructions for the examination of the chest which we have yet seen. The practitioner must, for this purpose, consult M. PIORRY's work; in the absence of which our review may serve to give a general view of the subject. We may add that the writer of this has convinced himself by a considerable number of trials, that the process of M. PIORRY may be strongly recommended. The power of his instrument is extremely great in *magnifying* the sound of percussion, and rendering its shades of difference distinct to the ear without any particular effort. The instrument is so simple and so useful that we feel inclined to urge the procuring it upon our readers. The process is very easily tried. It is but to get a thin plate of ivory, strong enough to bear a smart tap with the soft part of the finger's end; and then, with a very little practice upon an ordinary healthy individual, by trying the sound of the different organs, sufficient experience can be obtained, in a very short time, to produce great confidence in most of the indications afforded by the instrument. If to this be added a few trials made on dead subjects, which have been affected with diversified diseases, previously to making the ordinary dissections, the course of study of the pleximeter may be considered complete.

It is necessary, in using percussion, first to familiarize the ear with the natural sounds of the various parts of the chest. For example, the exact locality and extent of the heart and liver should be studied on a healthy individual. This, with the pleximeter particularly, is a very easy task. In making examinations of the sick, occasion should be taken, where applicable, to compare the opposite sides of the thorax at corresponding points. The degree of sound afforded by the thorax of different individuals varies so much that the mere memory of former examinations cannot be trusted; and a direct comparison of different parts of the patient actually

before us is absolutely necessary. Of course this comparison of corresponding points does not answer the common purpose when applied to the regions of the heart and liver, at which parts the density of the two sides differs materially. In these instances we must content ourselves with comparing adjacent parts.

The indications derived from percussion are very simple; they consist merely in a greater or less degree of density of the part struck upon. The one is produced by the solidification of the lungs in pneumonia, large masses of tubercular matter, tumours of any foreign character, aneurisms, large collections of liquids, as in the pleura, and finally, enlargements of the heart and liver. The diminished density evinced by the sound, on percussion, being louder and clearer, or more *hollow* than is natural, arises from the presence of an unusual amount of gaseous matter; as in emphysema of the lungs, and pneumo-thorax, accompanied or not with other effusion. The variety of situation in which these phenomena occur is very great. The augmented density may be situated in any part of the lungs; as in turning it may uniformly subside to the lowest part, varying in locality according to the different positions of the body, as in serous and purulent effusions into the pleura. In either case, they may be on one or both sides.

The inferences thus drawn may serve to draw attention to the spots in the thorax, where are situated the largest masses of disease; these are afterwards to be carefully examined with the stethescope, and in some instances by other methods. The phenomena furnished by percussion throw light on these last in various ways, which require a separate discussion.

In a few cases percussion renders audible the sound of *gurgling* and that of *metallic tinkling;* both phenomena to hear which the *stethescope* should be employed.

Previously to examining the respiration by the last named instrument, we should have noted, as above mentioned, in inspecting the thorax, the relative expansion and contraction of the two sides of the thorax during respiration; and we may add, the characters of the voice and the cough, if any exist, together with the degree of labour or other circumstances attending the performance of that function. The stethescope is then deprived of the plug which fills its trumpet-shaped extremity; and in this form, in which its power of collecting and augmenting sound is added to the very curious one of transmitting it, it is used to examine the permeability of the lungs to the

air. With its trumpet-shaped extremity it acts precisely like an ear-trumpet; and the extremely slight sound with which the air passes in and out of the air cells of the lungs is distinctly audible to the common ear. We omit to describe the well known instrument of which we are speaking: it is in all our shop windows, and were it not so common, it possesses the merit of simplicity in so eminent a degree that no possible difficulty can exist in procuring it to be made. We protest, however, against the bell-shaped trumpet mouth with which it is sometimes finished, and which we see in some English and French books, and we are sorry to add, in the work before us. This form is contrary to well established acoustic principles; and no authority can prove it so be so good as the other, were it even recommended by LAENNEC himself, which is not the case. We might as easily be confuted by authority in saying that two and two make four, or that the three angles of a triangle are equal to two right angles.

The trumpet end of the instrument is then successively applied over *all* the points of the external surface of the lungs. Here comes in play a little local anatomy in which practitioners sometimes grow rusty. It is perhaps hardly recollected by a considerable number, to what an extent the surface of the lungs is accessible. The top is examined in the triangular space situated between the clavicle, the upper edge of the trapezius muscle, and the scaleni. Access to the anterior part of the upper lobe of the lung can be had below the clavicle; to the exterior surface in the axilla, and to the posterior, by striking through the scapula, above and below the spine of that bone. Percussion is sometimes even made on the clavicle, near its sternal extremity, as well as on the ridge of the scapular spine. When these parts are excepted, there is very little left of the upper part of the lungs which cannot be subjected to auscultation; perhaps this is confined to the parts beneath the shoulder and the thick, projecting part of the trapezius muscle. The soft spaces above described are also perfectly fitted for the use of the pleximeter, which gives, at those points, extremely distinct indications. Simple percussion with the fingers, on the other hand, is scarcely at all practicable, either in the axilla, or in the triangular space abovementioned. Further down, the exposed surface of the lungs is free from intricacies, except the variable thickness of the muscles which lie upon the thorax. The posterior part of the lungs continues downwards, along the sides of the spine, for some distance below

the other parts of these organs; and the left lung extends lower than the right, on account of the partial occupancy of the thorax on the right side by the liver.

Besides the mere presence or absence of the sound of respiration, the cylinder, applied as we have described, will make the hearer aware of a variety of sounds of a very diversified character, which have received the name of *rattle.* The French term *râle* has frequently been used to express these sounds; but we see no reason for preferring a foreign term to one absolutely identical, and which belongs to our own language. Some of the rattles are loud, and of a singular and striking character. The *crepitating* rattle resembles the sound produced by decrepitating common salt in a hot dish, and is very analogous to the sound produced by pressing a portion of sound lung between the fingers, but a little louder. This indicates a physical state of things only found in the first stage of pneumonia or inflammation of the substance of the lungs, in œdema of these organs, and sometimes in hæmoptysis. The *dry, sonorous rattle* or snoring, and the *dry sibilant rattle* or whistling noise, are heard in the cavity of the thorax, by means of the instrument, in the commencing stage of catarrh. It is difficult to establish by morbid anatomy what is the precise deviation of structure which gives rise to the former of these. Laennec supposes that it is produced whenever the calibre of a bronchial tube is suddenly contracted within a small space, either by the pressure of a tubercle or other tumour, by sudden thickening of the lining membrane, by the presence of a small quantity of highly tenacious mucus, or by any other cause. In cases where the air passes through a small bronchial tube into one dilated to a large size, or into an excavation, the dry sonorous rattle occasionally resembles the cooing of a turtle dove. It is sometimes like ordinary snoring, a sound produced, as is well known, by the velum palati; and sometimes like that produced by rubbing the bass string of a violin with the finger.

The dry, sibilant rattle frequently resembles a long whistle of various note and loudness; at others it is like the chirping of a bird, the click of a small valve, or the short sharp sound produced by suddenly separating two smooth surfaces of marble placed in contact with each other, and thickly coated with oil. These different forms of the sibilant rattle often exist at the same time in different parts of the lungs, or succeed each other at the same spot after intervals of various duration. They are thought by Laennec

to be owing in all instances, to the presence of a small quantity of viscid mucus in the bronchial tubes.

The *mucous rattle* is the same sound which is heard by the naked ear in the trachea of the dying. The ear learns to judge with considerable confidence of the size of a series of bubbles, in which the air appears to traverse a fluid medium, giving the idea of something similar to a child blowing water through soap suds with a pipe. This is indicative either of declining or chronic catarrh; or of the presence of a large amount of thick liquid in the bronchia from any other cause, as from the evacuation of a tubercle; the discharge of a large amount of blood; or finally of the passage of air in and out of a tubercular cavity half filled with liquid. In emphysema of the lungs, the respiratory sound is diminished, and occasionally, where deep inspirations are taken, there is the additional symptom of a sibilant rattle.

The investigation of the *voice*, with the view of discovering pectoriloquy or ægophony, should be as extensive as that intended for the respiration. As, however, the great majority of tubercular cavities exist at the top of the lungs, the careful examination of these parts, comparing one side with the other, will afford a strong general presumption of the state of the lungs in this respect. For the purpose of examining the voice, the plug of the instrument must be replaced, and the whole thus converted into a simple wooden tube. When thus prepared, and placed immediately over a tubercular cavity filled with air, and communicating with the bronchia, if the patient speak or cough, the sound appears to come to the listener through the tube of the instrument, directly from the cavity within the chest. This constitutes the famous *pectoriloquy*, a most singular and striking phenomenon, which, from its being the distinctive sign of the third stage of consumption, has been imagined by many who have not studied auscultation, to be the principal object for which the stethescope is used. This is, we apprehend, by no means the case; as the information thus derived comes too late, only informing us of the existence of a disease already incurable by human art; and as the stethescope has other applications capable of distinguishing more numerous and curable diseases.

Ægophony is the peculiar modification of pectoriloquy, which owes its existence to the pressure of effused fluid on the lungs, enabling us to hear the natural resonance of the voice in the larger branches of the bronchia. The cause of its peculiar tone, resembling the cry

of a goat, is not known. It is indicative of pleurisy, with moderate liquid effusion, or of moderate hydrothorax.

The phenomenon of *metallic tinkling*, resembling the sound produced by dropping grains of sand into a metallic or glass vessel, is peculiar to pneumo-hydrothorax, with a fistulous opening into the bronchia. It would seem to be produced by drops of fluid falling into a larger quantity of the same. It is heard when the patient coughs or speaks, and sometimes in simple respiration.

Lastly, the *metallic resonance* is the product of a current of air issuing from a bronchial fistula into the cavity of a pleura distended with air.

In cases where, from effusion or any other cause, there exists a considerable disproportion between the two sides of the thorax, the exact difference is best ascertained by *measurement* with a tape.

The practice of *succussion*, recommended in the Hippocratic writings as a means of distinguishing hydrothorax, appears to have been laid aside by subsequent writers. Probably this may be in part owing to the fact demonstrated by LAENNEC, that in pure hydrothorax it is unfaithful, and only gives the result described in those cases in which the pleura contains, at the same time, a watery and a gaseous fluid. Some authors have asserted that this is a rough and severe method, giving the patient great pain. LAENNEC found this by no means the case; but practised it uniformly where it is desirable to establish the presence or absence of pneumo-hydrothorax, and when he could not obtain the metallic tinkling. He also used it not unfrequently to confirm a part of the indications drawn from the last phenomenon, or for the purpose of producing it. The patient was seated on a chair or in bed, when the operator placed his left hand on one shoulder, while with his right he applied a short, quick clap to the other. If the pleura contained any sensible quantity of liquid, together with gas, he always obtained, in this manner, a sound resembling that produced by shaking a bottle half filled with water.

The *abdominal pressure*, recommended by BICHAT, appears to have been altogether laid aside. The authority of such a man as LAENNEC, so noted for conscientious fairness of inquiry, would perhaps be sufficient to cause the discontinuance of this practice, even although it were not so very objectionable. This pathologist denounces it as an error of a fine genius; a method incapable of giving

satisfactory information, and inflicting an unjustifiable amount of suffering on the patient.

We would willingly proceed to give a sketch, in correspondence with the above, of the various diseases of the lungs, considered with regard to their physical indications. Such a continuation would form a synthetical view of what we have hitherto subjected to the analytical method. Our space, however, does not admit of this; and we postpone it to some future occasion. It might fall in better, perhaps, with the review of some more elaborate work than that before us. As the latter is only a manual for this mode of investigating, we have taken it as the text for the above brief and practical abstract.

The work is an extremely creditable one. We have been pleased in observing that Dr RYLAND adopts the plain and equally expressive English terms which correspond to the French expressions used by LAENNEC, instead of incurring such affected gallicisms as "*râle*" for rattle, "*bruit de soufflet*" for bellows blast, &c. The edition at present furnished us is neat, with good type and paper. We should even rather object to the extravagance of a large type and wide margin, as we apprehend that an increased amount of useful scientific matter is more desirable in our country, just now, than any of the luxuries of printing. A fair illustration of this may be found in the drawing, or rather diagram which the editor has had engraved for us, in addition to the work of M. COLLIN. From this we suppose the inference is to be drawn that American physicians so seldom dissect or open bodies, that it is necessary to furnish them with a pretty little print, in order to show them where "The Viscera of the Thorax" are situated. Not only is this figure, too, in a very indifferent style of execution, but very faulty in its anatomy, and the errors are precisely such as are calculated to create embarrassment in the use of percussion and the stethescope. Thus, the whole of the heart and large vessels are left exposed to view; the lungs lying entirely on the two sides, and possessing no thin edge projecting forwards and inwards. Now we know that these organs cover the greater part, and not unfrequently the whole of the heart; leaving between them nothing but the two folds of the mediastinum and a little cellular membrane. These circumstances are very necessary to be recollected in the use of the instruments of which we have had occasion to speak. Again, in the subjects which we have

seen, we think the liver would have been visible on the right side of such a section as is represented. The omission of this is the more particularly remarkable, as we are told, in page 15, that the sound is less clear on the right side "from the fourth and sometimes the third rib downwards," "owing to the neighbourhood of the liver," while the section is made, and the ribs carefully numbered, below the fifth in the right side of the figure, and as far as the sixth in the left. The elevation, too, of the top of the lung and pleural cavity above the first rib is very obscurely represented on the right side, and the fact is positively made otherwise on the left Now, we not only can obtain the hollow sound of the lungs with facility at this point, by a small pleximeter applied above the clavicle, a fact which no one would expect from the figure, but we have known the pleura opened at this point by a surgical operation in the neck.

Were we disposed to further criticism, we should comment upon the Introduction, the "entirely new Introduction; which is intended to embrace the amount of all that is important in the prefaces alluded to," (of those, namely, "which encumber the last edition,") "as well as that which is contained in various abstracts and reviews which have appeared of treatises upon the different methods of investigating thoracic diseases, and in such other works which are not generally before the profession in this country." Rather magnificent, we should think, to be achieved in ten small 12mo pages, of large type. What principally attracts our attention in this abstract, which constitutes nearly the whole of the additional matter furnished by the fellow of the Massachusetts Medical Society, is the tone of exclusively local feeling and exclusively local knowledge which it betrays. "In this country," the stethescope, he says, "still remains a novelty." Be it known to our Salem friend, that the stethescope was introduced into Philadelphia within somewhere about a year of its first publication; and has been used here, since that time, without any interruption; insomuch that some physicians in this city have been thought to gain reputation thereby. The editor seems to forget that there exist other states in this renowned union than those east of the Hudson; he writes only for "a New England climate" and "the New England practitioner." Against this exclusiveness, which would erect a sort of provincial tribunal in literature, we enter our protest. Science, they say, is of no country, and if this be the case, how much less ought it to be circumscribed

to a section of a country! If, like commerce, it form bonds of mutual good will between remote nations, on what justification can it be prevented from exercising the same kindly influence between the adjacent portions of the same land? Philadelphia has never been slow to do justice to New England genius; as certain acknowledgements in the early numbers of Silliman's Journal of Science, as well as the gladly accorded reputation of its editor, will abundantly exemplify. Should, however, "the fellow of the Massachusetts Medical Society" be indisposed to agree with us and accept the right hand of good will which we hereby offer him, we will take the liberty of addressing ourselves to his bookseller. We will ask the latter gentleman whether there be not a chance of selling some copies of his publication among us barbarians of the south and west. Is it likely that any thing great will be achieved here in the bookselling profession, which ought to be a blessing to mankind, until the different cities and countries throughout this union and Canada be brought to coincide in distinguishing and patronising the merits of the same productions? We are, and probably shall long be, far behind the English and French in the quantity and excellence of our literature; precisely because we have no large city, like London or Paris, adequate to take off experimental editions of new works, without ruining or endangering the publisher. Is there any mode by which this evil can be combated, other than a more cordial co-operation between reading men and publishers in the different cities, devoid of the pitiful jealousy which leads us to undervalue merit because it arises in a different situation from our own? For our own part, without pretending to exemption from human frailty, we do believe that we are in heart quite willing to honour those to whom honour is due, and to promote, as far as we can, the dissemination of useful works, without inquiring in what part of the American union they may happen to have been published or reprinted.

In testimony of this good will, we therefore now give notice, that in our opinion, the student of mediate auscultation can hardly dispense with a copy of the volume under review, unless, as is the case with many of our readers, he supply himself from Europe; inasmuch as it is, we believe, the *only* work on the subject published in the country, (excepting that part of Martinet's Manual of Pathology which relates to this subject). Nothing, in our humble apprehension, will form an adequate substitute for the excellent work of

Laennec, which we earnestly hope to see reprinted; but, whether this be studied or not, the Manual of Dr Collin will be found of the highest utility. If combined with a few dissections, carefully directed to what we would call "topographical anatomy," even without the larger work, its use can hardly fail of valuable results, not only in "a New England climate," but in all those regions, however situated, where people are in the habit of falling sick and dying of diseases of the lungs.

Original Communications.

ARTICLE IX.—*Observations on Pulmonary Consumption. By* JOSEPH PARRISH, M.D.

In the last number of this Journal (page 274) I communicated my views relative to the great importance of air and exercise in the treatment of pulmonary consumption, and the general inefficacy, if not positively injurious effects of those plans which are based upon the supposition, that the complaint is of an inflammatory character. I mentioned, also, as the result of my experience, that the use of active medicinal agents, of whatever nature, calculated to make a strong impression on the system, is generally injurious, by undermining the powers of the constitution without beneficially modifying the diseased action going on in the lungs. Nevertheless, I do not wish to be thought averse to the interference of the physician. On the contrary, I believe that, under certain circumstances, the judicious employment of remedial measures may be productive of much good: and the advice of a discreet practitioner will be found of essential service in regulating the manner of life, so as to bring it into accordance with the requisitions of the disease.

It would be a great mistake to consider the articles of the materia medica as the only instruments with which the maladies that affect the human system are to be encountered. Man is connected by a thousand different ties, moral as well as physical, with the objects around him, all of which exert a greater or less influence over his vital functions, and maintain health, or produce disease, according as they are in exact adaptation, or otherwise, to the wants of his system. The enlightened physician, therefore, looks abroad into nature; considers the various circumstances of climate, or season, or situation, in which his patients may be placed; weighs well the

influence of their social relations, their private habits, their mental peculiarities; and neglects nothing which can affect their health, whether it operates immediately upon the body, or indirectly through the mind. He is thus prepared to bring in aid of the more obvious remedies numerous agents, which lie unnoticed by the common observer in the mass of daily incidents; and when he cannot by his own personal efforts, or the agency of medicine, relieve the diseased action, may so place the sufferer, with regard to all the circumstances which surround him, that every cause which tends to aggravate the disease may as far as possible be avoided, and every favourable influence be adduced to alleviate or remove it. Such a course of management is peculiarly appropriate in the treatment of consumption, in which so little is to be gained by the use of energetic medicines, or the vigorous employment of depleting measures.

My object in the present communication is to point out the course of practice, so far as this can be done in general terms, which, within my own experience, has proved most effectual as auxiliary to that great remedy, without which all the rest are nearly useless—exercise in the open air.

Though neither bleeding, nor any other mode of depletion, is at all adequate to the cure of the peculiar tuberculous disease of the lungs, which constitutes genuine phthisis, yet affections of an inflammatory nature occasionally arise in the course of the complaint, which demand an antiphlogistic treatment; as, if not relieved, they might produce either immediately fatal effects, or at least aggravate the original pulmonary disorder, and accelerate its progress. Thus a patient with consumption may be seized with ordinary catarrh, or pneumonia, to which the previously diseased condition of his lungs predisposes him, and to which the same condition imparts a character of peculiar danger. Under such circumstances, I do not hesitate to confine my patients, to put them on a low diet, to bleed them generally and topically, to apply blisters to their breasts; in short, to put into operation the whole system of treatment adapted to cases not complicated with phthisis; always, however, bearing in mind the importance of surmounting the new danger with as little loss of strength as possible, and thus preventing the old enemy from gaining any advantage. As soon as the catarrhal and inflammatory symptoms have disappeared, I advise the patient immediately to recur to the plan of exercise. Sometimes, when there is considerable pain in the chest, with but little sympathetic affection

of the constitution, it may be proper to try the effect of general or topical bleeding, without confining the patient to the house, or in any way interrupting the course of exercise which may have been prescribed: but in these cases great care should be taken not to push the lancet further than is found to accord with the general strength.

Another condition of things frequently occurs in pulmonary consumption, which requires a temporary suspension of the regular plan of treatment; I allude to hæmoptysis. A few days of rest, however, with the use of bleeding, and other suitable remedies, will be found sufficient, in the majority of instances, to remove the complaint, and to place the patient in a condition to resume his former habits. There is danger in persisting too long in the treatment for hæmoptysis; and I have myself had reason to regret the fears which have sometimes caused me to confine the invalid beyond the necessary period. With my present convictions, I would rather incur the risk of a return of the hemorrhage by too early a resort to exercise out of doors, than by long confinement and a rigid diet, break down the energies of the system, and thus remove the only barrier which opposes the advance of the tuberculous disease.

Some years ago I was called to a very delicate female, who had been attacked very suddenly with hæmoptysis, and within a very short time had discharged as much as a pint of blood from her lungs. By bleeding, rest, an appropriate regimen, and other means usually employed in such cases, I succeeded, in the course of a few days, in arresting the hemorrhage: but hectic fever now made its appearance, attended with cough, and other symptoms strongly indicative of phthisis, which, in her case, was the more to be apprehended, as she had lost her mother with that disease. The winter was approaching, and if any advantage was to be obtained from exercise, the time for commencing it could not be delayed. I laid my views of the case fairly before the family, and suggested that the choice rested with them to carry these views immediately into effect, or if they should appear too hazardous, to have the assistance of further medical advice in consultation. They were content to rely upon my judgment. The patient was recommended, notwithstanding the recent hemorrhage from her lungs, and the lateness of the season, to take exercise freely in the open air. She followed my advice, riding out in a carriage, and walking frequently, and not allowing even the cold weather to confine her to the house. The conse-

quence was that her consumptive symptoms gradually disappeared, her strength increased, and she was ultimately restored to health: nor has she subsequently had any return of her complaint.

I have repeatedly witnessed cases of a similar character with the above, though perhaps not so striking: and it is now my uniform practice in all instances of hæmoptysis, where any tendency to consumption is displayed in the symptoms, or is apprehended from the constitution or hereditary predisposition of the patient, to recommend him very soon after the suppression of the hemorrhage to resume his outdoor avocations, and use exercise freely: nor, during many years that I have pursued this plan, have I had any reason to regret the adoption of it.

Except under the circumstances above mentioned, I am not in the habit of restricting the patient very closely in his diet. Nutritious and easily digested food is borne much better in this disease than we might imagine. The feelings of the patient himself are, in general, the best guide as to the quality and quantity of aliment which are suitable to his case. Should the use of animal food render him uncomfortable, increasing the irritation of his heart and arteries, exasperating his cough, and producing pain or uneasiness in his chest, he will readily concur with his physician in the propriety of abstaining from it; but when, instead of experiencing these effects, he finds himself refreshed and invigorated by a meal of such food, without any increase of local uneasiness, cough, or fever, his inclination should not be opposed, unless under very peculiar circumstances. I have sometimes been much struck with the manner in which patients with consumption bear strong food. A medical gentleman who laboured under this complaint, and ultimately died of it, used to assure me, after he had abandoned all hope of recovery, that one of the greatest of his earthly enjoyments was to sit down and take a meal of that kind of plain, substantial food to which he had been accustomed when in health. He declared that he usually felt better after such a meal.

It is a well established fact, that a meagre diet, especially when combined with want of exercise, is calculated not only to bring the scrofulous predisposition into action, but even to generate the predisposition itself in a healthy and vigorous constitution. As genuine phthisis is an affection, if not identical with scrofula, at least closely analogous to it, similar results may be expected from the same cause: and it is certainly unphilosophical to attempt the cure of a

disease by means which are calculated to favour its production. I never, therefore, recommend a low diet with the view of arresting or removing the tuberculous affection: it is only when hæmoptysis, or symptoms of genuine inflammation supervene, that I resort to this, together with the other antiphlogistic measures for their removal. When this end is attained, and the proper consumptive disease only remains, I again permit the patient to consult his own inclinations as to diet, or at least allow such food as I should esteem proper for a healthy man.

I do not expect much from medicines in consumption. Given with the view of subverting the disease, they are manifestly injurious, as, without operating specifically upon the morbid condition of the lungs, they often produce irritation and increase debility, and thus hasten the fatal issue. But as it is desirable to preserve all the functions in as healthy a condition as possible, any accidental derangement of them should be encountered by remedies which are adapted to the removal of similar derangements under other circumstances. Thus costiveness, diarrhœa, unhealthy biliary secretion, and disordered conditions of the stomach or other viscera, should be treated with appropriate medicines, with this reference only to the chief disease, that it is likely to be aggravated by the continuance of these morbid affections, and that, in the means employed for their removal, its influence in repressing the vital energies, and exhausting the system should not be overlooked. Occasion for the use of medicine is also afforded by the distressing symptoms which attend the progress of the malady, and which a regard for the comfort of the patient requires that we should try to palliate, as we are unable altogether to remove them. Opiates, and other anodynes, to relieve cough and allay irritation, with various pectoral medicines to assist or promote expectoration, are occasionally useful. Sometimes gentle tonics are advantageous in counteracting the debilitating and wearing influence of the disorder, especially in its more advanced stages. Of these I have found none to answer so well as the infusion of the wild cherry-tree bark. It promotes digestion, and gives tone to the system generally, without producing that irritation of stomach, and constriction of the breast, which are apt to result from the use of Peruvian bark in the same condition of things. The simple bitters, such as quassia, gentian, and columbo, may also be employed; and when a powerful tonic is required, the sulphate of quina will be found to answer a better pur-

pose than the bark in substance. I occasionally prescribe Fowler's solution when the chills are very distressing; but always with caution, and never for a longer period than two or three days at a time. A small blister kept open for some time, and renewed on different parts of the chest successively, is sometimes advantageous by giving an external direction to the disease.

I scarcely need observe that attention to clothing is of great importance to consumptive patients. In order to protect the system against the sudden variations of temperature to which our climate is liable, even in the summer season, it is highly desirable that flannel should be worn next the skin throughout the year: yet, if the night sweats are increased in consequence of wearing it, I am inclined to agree with ARMSTRONG in advising that it should be left off while the patient is in bed. There is another article of clothing which I strongly recommend, especially to female patients, whose necks and breasts are more exposed than those of men by their modes of dress. I allude to the dressed rabbit skin prepared by the furriers, and known by the name of the bosom friend. It should be worn over the breast, with the fur next the skin. The patient should put it on when he goes out of doors in the winter, and substitute on his return a piece of folded flannel in its place; as, if constantly worn, its good effects in warding off the cold are not so strongly felt.

There can be no doubt that a change of climate, in the winter, is often of great advantage, in the early stages of the complaint. From all that I have observed and read on the subject of the most suitable locality for consumptive patients, I am inclined to the opinion, that none of the places which have hitherto engaged the particular notice of the profession, combine more advantages than the interior of Georgia and Florida. The case of Dr BALDWIN, related in a former communication, may be mentioned as illustrative of the favourable influence of the climate in this district of country: but, in this instance, it was greatly assisted by the strenuous personal exertions of the patient himself. Indeed, it is my belief, that a warm climate is advantageous chiefly by the facilities which it affords to constant exercise in the open air. It is certainly not from the equability of temperature alone that good results; for individuals who are confined during the winter in rooms, the heat of which is regulated by the thermometer, are seldom found, upon the return of warm weather, to leave their chambers improved, if indeed they leave them at all.

Continued exercise is essential to the favourable operation of a warm or temperate climate. In choosing a place of residence, the patient should always avoid situations contiguous to the sea, as the salt air from the ocean, blowing over the land, according to the almost universal experience of practitioners in this country, is highly irritative and injurious to the lungs affected with tuberculous disease. It is on this account, in part, that the interior of Georgia is recommended in preference to Charleston, or other places on the seaboard, to which consumptive patients have too frequently been sent to die.

It is only in the first stages of consumption that I recommend a change of climate. When the disease has deeply fixed itself in the lungs, and the symptoms of extensive disorganization are evident, it is vain to expect any material advantage from this or any other remedy. Most of us, I think, have erred in practice by advising our patients to take long voyages when there was no reasonable prospect of advantage. It is certainly better to die at home than in a land of strangers. The last patient of mine who sailed for the south, did so without my advice, though I did not discourage the voyage. It would have been better had I discouraged it; for soon after his departure I received the news of his death. I have now determined that when a patient applies to me in the last stage of consumption, I will never advise a change of climate.

Long voyages, in warm or temperate latitudes, have frequently been productive of advantage in the commencement of the complaint. The case of my own brother is strongly corroborative of this statement. While yet very young in the profession, I attended him during a whole winter, in consultation with Dr Wistar, for a complaint of his lungs, accompanied with cough and hectic fever. We treated him upon the principle that he was labouring under an inflammatory affection. But he grew worse, and aware of the fact, determined to go to sea, and try the effect of a thorough change of climate. Being engaged in mercantile pursuits, he obtained the situation of super-cargo on board of a vessel bound to the East Indies, performed the voyage, and went through all the duties of his station as if he were in full health. He returned wonderfully improved. He afterwards went two other voyages to India, and during the whole of this period the disease was kept at bay. After his third voyage, the embargo took place, and prevented a fourth for which he was preparing. The disease now soon gained the ascen-

dancy, and he passed away. His lungs, upon examination after death, were found full of tubercles.

There are a few considerations connected with the subject of phthisis, highly deserving of attention, which I have not yet noticed. Of these one of the most important is the mutual influence of the pulmonary disease and the uterine functions over each other. So far as I have observed, it may be laid down as a rule almost without exception, that in the latter stages of confirmed consumption the catamenia are suppressed; and their absence may always be regarded as an unfavourable symptom. So long as the uterus continues to perform its healthy functions, I regard the prospects of the patient as by no means desperate. Much observation has convinced me that the condition of this organ which gives rise to the regular return of the menses, is strongly opposed to the progress of the tuberculous affection in the lungs, and presents one of the firmest barriers which it has to overcome. When this is passed, the disease seldom meets with any further obstruction in its course, and soon sweeps away the little remnant of vital strength. It is therefore an object which should always engage the anxious care of the practitioner, to favour the uterine system in the struggle, and to do whatever may lie in his power to maintain its healthy operations. He is thus furnished with an additional inducement to press upon the patient the importance of fresh air and continued exercise, which, while they directly counteract the consumptive tendency, produce the same effect indirectly by giving strength to one of its most powerful antagonists. Should the catamenia have been suppressed, he will endeavour to restore them by the judicious interposition of remedies adapted to the nature of the case, but which it is not my object to indicate here. I will merely observe, that I have found great advantage from calcined sulphate of iron, combined with aloes and Venice turpentine; and that in one case, complicated with dyspeptic symptoms, I succeeded in bringing about a return of the menses, with great benefit to the health of the patient, by the use of the following pills, of which two were taken twice or three times a day for a considerable length of time.

℞.—Myrrh. pulv. Sulph. ferri exsiccat. āā. ℈ii.; Subcarbonat. potassæ, Saponis, āā. ʒss.; Aquæ q. s. ut fiant pil. No. XL.

The maintainance of the healthy condition of the uterus is highly important in another point of view. The influence of gestation in suspending consumption is well known to every practitioner. Dur-

ing the ascendancy of the uterine action, the symptoms are often greatly alleviated, if not removed; and the patient appears to be recovering from the complaint. It is a very general impression, however, that soon after delivery the original symptoms recur with equal or even greater violence; and that the fatal issue, though perhaps postponed for a short time, is not less certain for the brief interval of amendment. This is undoubtedly true in some instances, more especially where the disease has acquired a very strong hold upon the constitution previously to the commencement of gestation. But it is no less true, that frequent instances occur in which the consumptive tendency is restrained for many years; and some in which it is ultimately eradicated, even though it may have originally displayed itself in the most alarming manner. The same effects which gestation produces, result in a greater or less degree from lactation; and thus pregnancy may again occur, before any very serious inroads have been made upon the lungs, and may resume its former favourable influence. The disease is in this way kept off for many years, till at length the disposition to it passes away, and many valuable lives are protracted to a late period, which must otherwise have terminated at the moment, perhaps, when their importance began to be most strongly felt. In making this statement I speak from my own experience. I have repeatedly witnessed cases, in which all the symptoms of incipient phthisis have been presented in individuals possessing a strong hereditary or family predisposition to the complaint, and have nevertheless entirely disappeared before the influence of repeated gestation. This subject, however, in all its bearings, involves considerations of the most delicate character, compelling the medical practitioner to forego the minute detail of cases which, although names may be omitted, are still liable to be recognised by those particularly interested, and may be regarded as an indirect departure from that scrupulous delicacy, integrity, and honour which should ever be inseparable from the character of a physician, who, in the exercise of his professional duties, must enter into the inmost privacies of families, and receive communications of the most confidential nature. Hence this part of the subject can be touched, in a periodical publication, only in general terms; and the reader must be left to fill up the details.

It would be highly interesting to inquire how far the existence of consumption in the female, during pregnancy, is likely to affect the

future constitution of the child. We know that the disease is very often, perhaps in the majority of instances, dependent on a peculiar family predisposition: and so strong is the hereditary tendency, that though, from some happy combination of circumstances, it may be concealed in one generation, it will sometimes display itself in the next; and children, whose immediate parents may have possessed apparently sound constitutions, may be affected with phthisis inherited from a grandparent. Reasoning *a priori* we should be apt to infer that an infant, born of a mother labouring under the disease, would stand but a slender chance of ultimate escape. But experience does not always confirm the deductions of reason. In cases which have fallen under my own observation, I have not discovered any stronger consumptive tendencies in the offspring of females, in whom symptoms of an alarming character have been developed, and afterwards disappeared under the influence of gestation, than in those of parents who have been affected with the disease at other times. A striking instance has occurred to me of exemption from phthisis under apparently the most unfavourable circumstances. Some years ago I attended, in consultation with one of our first physicians, a middle aged lady, who ultimately died of a complaint in her stomach and bowels, without the slightest evidence of pectoral affection. I was informed by the sister of this lady, that her mother had died of consumption only a short time subsequently to her birth, and was affected with the disease during pregnancy. The life and experience of one physician are too limited to allow him to collect frequent instances illustrative of this point in pathology: but, so far as my observation has extended, I have discovered nothing to discourage me in the course which I pursue in my own practice, and recommend to others, in relation to the influence of gestation upon consumptive affections.

In another paper it is my intention to offer some further considerations which I consider of importance in the management of phthisis pulmonalis.

ARTICLE X.—*Case of Ovarian Pregnancy. Communicated by* D. FRANCIS CONDIE, M.D.

Elizabeth C———, aged 34 years, on the evening of the 21st of July 1829, was seized with a violent pain of the abdomen and some degree of nausea, in consequence of which I was requested to visit her. I found her lying upon the bed, complaining of a dull pain in the right side of the abdomen, which she described as coming on at intervals. She stated that for about nine weeks previously she had laboured under a constant discharge of blood from the womb, which since the occurrence of the pain had increased considerably in amount. Her pulse was somewhat feeble, but otherwise natural: there was no heat of the surface, nor any tenderness of the abdomen upon pressure. Tongue clean and moist. Bowels constipated. The patient had been married to her second husband about five months. By her former husband had several children, all of whom are living. Previous to her last marriage suffered frequently from attacks similar to the present, but since had enjoyed perfect health. She did not believe herself to be pregnant. A dose of castor oil was directed, to be followed by a combination of acetate of lead, ipecacuanha and opium. By the 28th of the month she appeared to be entirely relieved from every symptom of disease, and was able to make use of gentle exercise in the open air. On the evening of the 3d of August she was again attacked with violent pain in the abdomen, nausea, and constant tenesmus, with occasional fluid discharges from the bowels. There was no tenderness of the abdomen upon pressure; the pulse was but little altered, the tongue clean and moist, and the temperature of the surface natural. The hemorrhage from the uterus had not returned since the 24th ultimo.

The case presenting nearly all the leading symptoms of dysentery, was treated accordingly. A purgative of calomel was directed and followed on the ensuing day by a dose of castor oil; by this copious bilious evacuations were procured, and the patient felt somewhat relieved. Minute doses of calomel and ipecacuanha in combination were now directed, together with warm fomentations to the abdomen, oily and mucilaginous injections into the rectum, and simple mucilaginous fluids for drink and nutriment.

August 6th.—The symptoms already enumerated have increased in violence, and in addition, there is now increased heat of the surface,

an accelerated pulse, thirst, and considerable tenderness of the abdomen. Sixteen ounces of blood were drawn from the arm; by which all the febrile symptoms were removed, and the tenderness of the abdomen diminished. The fomentations and other remedies continued.

7th.—The tenderness of the abdomen still continuing, with increased frequency of the pulse and some heat of surface, twelve ounces of blood were drawn, the other remedies being continued. From this day the symptoms appeared gradually to diminish, and hopes were entertained of the patient's speedy recovery. On the 9th and 10th discharges of fluid fæces had taken place from the bowels. On the 13th, however, the tormina and tenesmus returned with increased severity, accompanied with great thirst, increased heat of the surface, and considerable tenderness of the abdomen. The pulse was contracted, hard and frequent; the tongue covered with a yellowish fur in the centre, red at the edges, narrow, and pointed at the extremity. Occasional small discharges of mucus from the bowels. During the day the patient was bled three several times; loosing in all about thirty-two ounces of blood. On the 14th the symptoms were very much abated, with the exception of the tormina; this depriving the patient entirely of sleep, ten grains of Dover's powder were directed to be given every three hours until sleep ensued.

15th.—Has passed a tolerably comfortable night. Her pulse is now perfectly natural, though somewhat feeble; there is little tenderness and no tumefaction of the abdomen; no thirst; some desire for food. During the day discharged from her bowels, at intervals, a quantity of a glairy matter, streaked with blood, each discharge being attended with much straining and a severe cutting pain in the neighbourhood of the hips and sacrum. Directed a dose of castor oil, and at bedtime a pill composed of a grain of opium and one of ipecacuanha.

16th.—During the night she had copious discharges from the bowels of a greenish fluid, very fetid and intermixed with coagula of blood. She is free from pain, and experiences but little of the tenesmus. No urine has been passed for the last twenty-four hours—bladder considerably distended. The catheter being introduced, three pints of thick high coloured urine were drawn off. During the day the patient has been comparatively free from pain. Discharged occasionally from the bowels a little bloody mucus.

17*th*.—Passed a tolerably comfortable night, but during the day the pain and tenesmus returned with increased violence. The location of the pain, and the other symptoms pointing out the rectum as the chief seat of the disease, an attempt was made to ascertain the exact condition of this intestine by introducing the finger per anum; this occasioned, however, such violent pain to the patient, indicated by loud screams and contortions of the body, that I was obliged to desist. The finger was then introduced into the vagina, and came in contact with a tumour, situated at the posterior part of the canal, apparently within the rectum, but so high up as to be reached only by the extreme point of the finger. The slightest touch of this occasioned the patient such intense pain that all further examination was obstinately resisted. Her strength was now considerably impaired; her pulse weak but regular. There was no heat of the skin, no tumefaction, and but little tenderness of the abdomen. Tongue moist, slightly furred in the centre and red at the edges. A pill, composed of two grains of the extract of cicuta, half a grain of opium, and the same amount of ipecacuanha, was directed to be taken every three hours during the day, with a moderate quantity of light unirritating food, and at night an injection into the rectum of four grains of opium suspended in olive oil. Under this treatment the patient appeared to improve very rapidly. Her days were passed without pain, and she enjoyed three or four hours sleep during the night. Her pulse became fuller and more strong, and her strength and cheerfulness began to return. Occasional slimy discharges, intermixed with a small quantity of blood, still however continued to take place from the bowels, but accompanied with very little tenesmus. This state of apparent improvement was but of short duration. On the 20th there occurred several copious evacuations of blood from the rectum, with intense pain at the lower part of the abdomen, causing the patient to utter loud and repeated cries. Two grains of opium, one of ipecacuanha, and five of acetate of lead were directed every three hours, but without the slightest benefit. Towards evening the pains came on at regular intervals, and were compared by the patient and the females who surrounded her to the pains of labour. They were accompanied with a violent ineffectual inclination to evacuate the bowels. About eight o'clock in the evening, during a severe paroxysm of pain and straining, there was passed from the bowels a mass, which upon examination proved to be a fœtus of about four months, in a state of putrefaction.

Neither sex nor features could be distinguished; the head had burst at the anterior fontanel, and the brain was evacuated. The arms and legs, with the feet and hands, were however entire, and from them the age of the fœtus was conjectured. Immediately after the escape of the fœtus there was discharged a very great quantity of blood, fluid and of a bright red colour. The patient passed a very good night and was apparently doing well; her pulse being less feeble, and her strength and appetite far less impaired than could have been anticipated from the amount of her previous suffering, and the quantity of blood which had been discharged. On the 22d the hemorrhage from the bowels again returned, and at one evacuation full sixteen ounces of fluid red coloured blood were discharged. She complained now of violent cutting pain of the lower part of the abdomen: her strength sank considerably and her pulse became feeble and frequent. On the morning of the 23d she had a violent chill, which continued for several hours; her face assumed a dirty yellow appearance, her features became contracted, her eyes dull and languid, lips and tongue blanched. In the afternoon Dr R. M. Huston was kind enough to see the patient with me. The symptoms were nearly the same as those last mentioned, with some tenderness of the abdomen and frequent cutting pains in the lower part of the bowels. The extremities were cold and the temperature of the surface throughout reduced; the abdomen, though somewhat tumid, was soft and compressible. She had taken some chocolate and a soft boiled egg.

As there was but little hope entertained of the patient's recovery, we contented ourselves with endeavouring to procure sleep and a suspension of pain by the exhibition of the sulphate of morphia; and with the view of exciting a more brisk circulation upon the surface of the body, frictions with cantharides and turpentine were directed.

24th. Passed a very restless night; symptoms the same as yesterday. Directed beef tea and small portions of wine whey. During the day she gradually sank, and at twelve o'clock, P. M. died without a struggle.

Sectio cadaveris, twelve hours after dead; present Dr Huston.

The body was well formed, rather above the common size, and not the least emaciated. The fat covering the abdominal muscles was full an inch in thickness. On laying open the cavity of the abdomen the small intestines presented themselves, distended with gas, and free from any marks of disease. The peritoneum through-

out was free from inflammation. No effusion was detected within its cavity. The stomach, liver and spleen perfectly healthy. The small intestines being removed, the uterus was discovered enlarged and rising above the pubis. From its left angle there projected a rounded tumour about the same size with the uterus, of a dark purple colour, and very soft to the touch. To this tumour was firmly agglutinated by adhesive inflammation the sigmoid flexure of the colon and the cœcum, which were drawn down from their natural situations. These adhesions being separated, the cœcum and colon were removed; both of which were perfectly healthy, and contained a few fragments of hardened fæces. The vagina was next separated from its connections and laid open: an incision was also made into the cavity of the uterus through the centre of its anterior parietes, and extending from the orifice to its fundus. The mucous membrane of the vagina was covered with a muco-purulent secretion, as was also the internal surface of the uterus. On the latter could be easily detected the remains of a decidua. The uterus measured from the fundus to its orifice four inches and a half, and the same at its greatest breadth. Its substance had considerable thickness about the orifice of the right fallopian tube, while at the opposite angle it was somewhat thinner than ordinary. The right fallopian tube and ovary were perfectly natural, but surrounded by numerous adhesions, the product of inflammation. In the place of the left ovary was situated the tumour already mentioned. The whole of the pelvic viscera in connection were now dissected out. The rectum being slit up there was discovered in it an umbilical chord, four inches and a half in length; this being traced upwards led to an opening through the anterior parietes of the intestine into the cavity of the tumour, occupying the place of the left ovary. This opening was about two inches in diameter and situated about six inches above the inferior extremity of the rectum; it was of an irregular form and presented a rough torn edge. The sac or tumour was evidently formed at the expense of the left ovary. In its cavity was found a placenta of considerable size, the vessels of which appeared to lose themselves in the substance of the tumour. The surface of the cavity was rough or irregular and covered with large coagula of blood; these could not be separated entirely from the former, but appeared to penetrate a kind of cellular structure, of which the walls of the tumour were

composed. These latter were about three-quarters of an inch in thickness. The left fallopian tube, (the frimbriated extremity of which was in contact with, and adhered to the tumour) at its orifice in the uterus, would admit only an ordinary bristle, but its cavity gradually enlarged, and about two inches of the tumour was of sufficient capacity to admit two fingers. It was filled with a muco-purulent secretion. The uterus itself was free from inflammation and presented not the slightest trace of rupture or cicatrix. The rectum adhered intimately to the tumour. Its coats were thickened and inflamed; their colour throughout was a dark purple, excepting for about one inch and a half above the inferior extremity, where they appeared to be free from disease. The cavity of the intestine was evidently more capacious than natural. The other cavities of the body were not examined.

ARTICLE XI.--*Case of Gonorrhœa, alternating in a singular manner with Bilious Remittent Fever; accompanied by reflections. By* LEWIS CAMPBELL, M.D. *of Moutton, Alabama.*

On the 23d of July 1827, I was called by Mr ———, who had been affected with a gonorrhœa three since; and as he had been obliged to ride some distance every day on business, the symptoms were somewhat aggravated. He suffered greatly from ardor urinæ and chordee. The discharge of matter from the urethra was very profuse, and considerable general excitement was present. His bowels were freely opened with sulphas magnesiæ; one drachm of balsam of copaiva was directed to be given three times a day, and a low diet enjoined. He obtained sudden relief of the ardor urinæ from this course; but a profuse discharge of matter, and the retraction of the urethra remained. His business calling him from home, he was under the necessity of riding some distance every day till the 26th, when he was attacked with a bilious remittent fever. During the evening he felt languid, sick at stomach, &c. At eight in the evening he was taken with a violent chill, followed by fever. During the chill the gonorrhœal discharge was suddenly suppressed. On the morning of the 27th I found him entirely free from all the symptoms of go-

norrhœa. He assured me he felt no inconvenience from that source.

The fever continued till the 30th. During this time he enjoyed entire exemption from the gonorrhœal symptoms. On the 30th his general health being much improved since the preceding day, he escaped fever, but was again attacked with gonorrhœa and chordee. He was again put under treatment for those affections. His general health continued to improve till the 2d of August, when, from exposing himself to the sun on a short ride in the heat of the day, the bilious symptoms returned; and he then had chills and fevers two days in succession. During the first chill the running was again suppressed; and he was completely relieved from any uneasiness in the urethra during the continuance of the febrile symptoms. On the 4th he experienced exemption from fever and a return of gonorrhœa. His general health continued to improve from this period, though the affections of the urethra proved somewhat lingering. His stomach rejected the balsam in any form, and scarcely tolerated the presence of any medical substance whatever. Regimen and time effected a cure. Was the suppression of the gonorrhœa during the fever, and its immediate return when the fever yielded, a mere coincidence? Or was it a metastasis of morbid action from the urethra to the stomach, and from the stomach to the urethra? If the latter, does it not favour the opinion of the physiological school relative to the non specific nature of venereal affections?

To the preceding case, in which our readers will perceive a fair illustration of the transition or metastasis of disease, we annex another, which offers, we believe, another illustration of the same phenomenon. In the following case the disease was evidently transferred from the tracheo-broncheal mucous surface to the gastro-enteritic portion of the same membrane. In both regions the muscular fibres were affected, giving rise in the former to the symptoms of croup, in the second to colic; for it is well known at the present day that neither croup nor colic can exist without the participation of the muscles of the larynx, or the muscular coat of the intestines. The following case is also interesting in another point of view; for it indicates that an irritation purely nervous may assume gradually all the characteristics of inflammation; and secondly, exemplifies clearly the translation of irritation from the abdominal organs to the cerebro spinal system, giving rise to convulsions.—*Ed.*

ARTICLE XII.—*Case of Croup followed by Colic, Convulsion and Inflammation, and terminating favourably. By* F. R. GREGORY, M.D. *of Lombardy Grove, Virginia. Communicated in a Letter to one of the Editors.*

I was called, sometime last winter, to see an infant son of Mr G. about three months old, labouring under a most violent catarrh, with some premonitory symptoms of croup. By the use of emetics, warm bath, a dose or two of oil, and the substitution of barley water for its usual diet, the catarrh and every symptom of croup were relieved. I left the child now convalescent, and was called the next day to see it with an attack of colic, which for four or five hours resisted every means I could employ for its relief. I gave several doses of oil of butter and castor oil, laudanum, as well as Hoffman's anodyne, injections of barley water, and oil of butter and molasses combined; placed my patient in the warm bath, and applied blankets wrung out of hot water after taking him out. After persevering for some time in the above means, my little patient was relieved. On the next day he was again attacked with colic. I now inquired more particularly as to the cause of this second attack of colic, and learnt from the mother and nurse that the child had eaten nothing but cow's milk diluted, as I had prohibited its mother's milk as diet, (she being an unhealthy woman). Fearing that there might be some inflammation of the stomach and bowels, I examined the abdomen &c., but found that there was no tenderness on pressure, no fever, and no appearance of the tongue indicating such a state. It frequently occurs in our southern states, that the torpid and inactive state of the liver is the cause of frequent attacks of colic. Conceiving that such might be the case in the present instance, I commenced the treatment of this attack with a tea-spoonful of oil and one grain of calomel combined; the medicine not operating sufficiently early, I gave an injection of barley water and repeated it several times. The oil and calomel now operated pretty well and produced two copious stools, the discharges resembling the curd of milk. Still the excruciating pain, evinced by rubbing the gums together, mournful cry and great restlessness, continued, and was at last followed by convulsions. I now placed the child in a warm bath, and after taking him out applied the blankets as before; this afforded

some relief. In about fifteen minutes after the blankets were removed another convulsion came on; bath and blankets as before; convulsions went off; still no relief of the pain; gave five drops of laudanum and repeated it twice in about twenty minutes; repeated the bath and applied the blankets as before. I was determined to continue their application till the pain was relieved; but in about twenty minutes my little patient seemed free from suffering. I now left the child, hoping he would continue to mend, but fearing the consequences of the laudanum he had taken. On my visit the next day I found him extremely ill, with inflammation of the stomach and bowels. Leeches could not be procured, and I was afraid to bleed from the arm; ordered injections of barley water, to be repeated five or six times during the day, and a tea-spoonful of the oil of butter three times a day; barley water as diet. The child continued extremely ill for twenty-four hours, and I feared that the case would certainly prove fatal; his pulse had become almost imperceptible; there was squinting of one eye, pouting of the lips, &c. I now applied a blister over the whole abdomen, which remained on for four hours without producing the least pain. This, with the other alarming symptoms, caused me to despair, and taking off the blister I found the surface underneath unchanged. In a short time I again examined the part from which the blister had been removed, and found it red; vesicles soon appeared, reaction took place in the circulation, and the child seemed free from pain. I continued to give nothing but barley water as diet and medicine by the mouth, and ordered injections of it to be repeated four or five times a-day. My suffering little patient continued to improve, and seemed perfectly well, with the exception of a hoarse dry cough, which was relieved by a watery solution of assafœtida.

I am aware that many will object to the management of the attack of colic, and will attribute the inflammation of the stomach and bowels to the large doses of laudanum and Hoffman's anodyne. Yet the milder plan had been pursued and had failed. In the management of both attacks of colic I commenced with laxatives and injections, and these failing, my practice was bolder and more energetic. It is my rule never to suffer a patient to die of a disease which I have a remedy to relieve, from the fear of the consequences of that remedy. The situation of a patient under such circumstances is like that of a man in the third story of a house on fire, when every engine has poured forth its water in vain, and the flames continue

to advance and spread on every side. If he remains and trusts to the engines to subdue the flame, death is more certain than from injury which he may sustain by leaping from a window; and what Broussaist is there that would not say to a man so situated, jump!

ARTICLE XIII.—*Reports of Selected Cases, occurring in the Hospital of the Walnut Street Prison. By* FRANKLIN BACHE, M.D. *Physician to the Prison.*

Case of Aneurism of the Aorta, its Rupture, and Sudden Death.

[Read before the Kappa Lambda Society.]

David Gibson, aged twenty-nine years, by occupation a sailor, was admitted into the hospital on the 13th of May 1828, with the following symptoms:—Pain over the region of the heart, palpitation, pain in the head and dizziness. When the heart palpitates it produces a breathless sensation. The pulse is bounding, and the heart beats violently. The look is anxious and pale. The palpitation has existed for six or seven months. Weakness considerable, and appetite poor. Has had no disease of the breast lately. The symptoms are always aggravated at night, and sleep is taken in a semi-recumbent posture. There is some cough, and the bowels are not freely open. Suspect dropsy of the pericardium.

Blister over the region of the heart, and cream of tartar and jalap daily.

20th. Much better. Palpitation only occasional. Blister healed. Continue the cream of tartar and jalap, and repeat the blister.

21st. Blister drew well, and pain translated from the breast to the right hip. Was affected with severe pains in the bowels; and the cream of tartar not operating, was ordered enemata, which produced several stools in the evening with relief.

22d. Much better this morning. No palpitation. Suffers most from the pain in the bowels and right hip. Pulse jerking.

24th. Pulse still throbbing. Heart and carotids beat sensibly to the eye. Patient complains of great weakness.

Omit the cream of tartar and jalap, and give tincture of digitalis, ten drops three times a day.

27th. Was affected last night and this morning with a diarrhœa, for which rhubarb was prescribed. The digitalis was omitted on account of its affecting the head.

31st. Patient says he feels very well. Pulse vibrating. The palpitation continues, but is unattended with pain.

June 3d. The same. Resume digitalis.

10th. Had a severe pain over the region of the heart, attended with palpitation. Pulse full; appetite pretty good. Feels easier after taking the digitalis.

Continue digitalis. Form a caustic issue over the region of the heart.

14th. The caustic issue is about the size of a dollar, and proves very painful.

17th. Pulse full and hard. Pain near the issue and under the left scapula.

Ten cups over the left scapula. Continue the digitalis.

19th. The pain under the scapula has disappeared. Pain over the region of the heart.

Apply quarter of a grain of morphia to the issue. Continue digitalis.

21st. Easy to day. Slept pretty well the two last nights. The dose of the digitalis has been increased to fifteen drops. The head is dizzy.

Continue the digitalis without increasing; also the morphia.

24th. The head is easier. Walking about produces a feeling of exhaustion. On the 22d experienced a sensation, as if falling from a height. The slough from the caustic has separated, and the ulcer feels sore. Used only the eighth of a grain of morphia the two last nights, and has not rested so well. As however he sleeps much in the day when one-fourth of a grain is applied, continue the eighth of a grain doses.

26th. Slept badly last night. The effects of the morphia seem to be developed in the daytime.

Apply the morphia at four o'clock, P. M.

28th. Did not sleep well last night. Feels when in bed as if falling from a height.

Omit the digitalis.

July 1st. Slept very well last night. No difference in his feelings from omitting the digitalis.

Continue morphia in eighth of a grain doses.

July 5th. Appetite moderate. Pulse softer. Issue is dressed with savine ointment and discharges well. The morphia being expended, substituted opium by the mouth.

8th. Patient thinks the issue has relieved the original diseased feeling about the heart. At first he could not lie down at night. To-day feels a soreness in the breast.

Ten cups to the breast.

10th. The cups relieved the soreness in the breast. Pain in left side yesterday for two hours.

Allow issue to heal.

12th. Feels easy. Throbbing over the heart; pulse rather vibrating. Issue healing.

19th. Pretty well to day, but last night was affected with chills, pain in the head, and sharp pain in the left side.

Ten cups to the pain in the side.

22d. Great pain since the 20th; very sharp last night and this morning. Issue exhibits fungous granulations.

Tartar emetic plaster to the breast. Apply red precipitate ointment to the issue.

24th. Pain under the left scapula.

Twenty cups to the pain.

26th. Pain somewhat abated. Tartar emetic plaster has produced an appearance like cutis anserina, and was removed. Issue healing. Costive.

Ordered a dose of magnesia.

This day, at about twelve o'clock, soon after my visit, Gibson, while walking in the long gallery of the prison, suddenly fell, and instantly expired. The case being highly interesting, as well in its progress as termination, I determined to examine the body; and in order to avail myself of the best anatomical aid in detecting the morbid appearances, I requested my friend Dr Horner to conduct the dissection for me. This he kindly consented to do, and the following was the result of the examination, made six hours after death.

On raising the sternum, the pericardium was found distended with blood. On opening this membrane, a large quantity of blood was observed, separated into serum and crassamentum. The right auricle and ventricle, as well as the pulmonary artery, exhibited a natural appearance. The source of the hemorrhage proved to be a rupture of the aorta, just beyond the valve, into the pericardium, the orifice being about the size of a crow-quill. The aorta was

aneurismal from its root to the place at which it gives off the left subclavian artery. The right lung adhered in one place to the pleura costalis, and the left exhibited the marks of old tubercles. The stomach was full of food, and proved to be healthy, as were also the intestines.

Remarks.—My diagnosis in this case proved to be erroneous, as I supposed the affection to be dropsy of the pericardium. I regret very much that I did not employ the stethescope, as I think it not improbable that by its aid I might have detected the true nature of the disease.

Cases of Pneumonic Inflammation, attended with the copious Expectoration of Pus, and ending in Recovery.

[Read before the Kappa Lambda Society.]

Case 1.—William Coulter, a mulatto labourer aged twenty-two years, was admitted into the hospital in the month of March 1828. He had been treated for pneumonic inflammation at the Arch street prison, before his transfer to this prison, and was still sick when he arrived. Up to the 1st of April he had been bled and blistered twice, and took antimoniated barley water and decoction of seneka. He has expectorated pus freely for about three weeks, and since the free expectoration has been better. At present (April 1st) the expectoration is somewhat diminished, and the patient is getting better. The appetite is good, sleep easy, bowels open, skin cool, pulse regular. Ordered the decoction of seneka to be continued, and a nourishing diet.

April 3d. Cough rather more frequent; appetite continues good; expectoration the same. Continue the seneka, and take, in addition, the liquorice mixture.

5th. Patient feels pretty well; expectoration inconsiderable. A puriform liquid of a bad smell is discharged from the nose. Breast without pain, bowels open. Pronounced to be convalescent. Continue the same remedies.

8th. Expectoration same. Matter from the nose not so fetid. Had a griping yesterday, and took to-day half a drachm of rhubarb.

Pulse good; appetite very good; sleep natural. Omit seneka, and continue the liquorice mixture.

10th. The patient says he feels well, though he still expectorates. Discharged relieved.

July 23d. To-day I met Coulter in the street, and he said he was quite well.

Remarks.—I have copied this case just as it stands in my note book, where I entered it as a case of phthisis. It had the aspect of that disease, being characterized by emaciation and copious purulent expectoration. Still the result proved it to be one of those cases in which the lungs are not deeply implicated. Unquestionably the pus in this case came from abraded and inflamed surfaces, and not from abscesses or suppurating tubercles. I am thoroughly satisfied that, when suppurating tubercles exist, we have not yet learned how to arrest the disease; and I have reason to believe that it is such cases as the one here reported that pass for instances of cured phthisis. It is not always easy to distinguish the true from the spurious cases, but I should be disposed to say, as a general rule, that when the *pulse is quick*, and dyspeptic symptoms are present, associated with cough and purulent expectoration, the fatal disease, which is understood by the name of pulmonary consumption, may be considered as fully formed.

Case 2.—John Hartman, farmer, aged forty-four years. This also was a case of pneumonic inflammation, ending in suppuration. The subject of it entered the hospital on the 5th of February 1828, and was for some time very ill. A free expectoration of pus came on, with a subsidence of all the bad symptoms. About the 25th of March he became worse, being affected with pain in the chest, hard cough and fever; and the expectoration becoming less free, I ordered a blister to the breast and the sweet spirit of nitre, and discontinued some tonic medicines which he had been previously taking.

April 1st. This is the fifty-sixth day of his disease, and he takes seneka decoction and an anodyne mixture at night. His diet consists principally of milk, bread and chocolate. The patient gets slowly better, and I entertain hopes of his recovering from the great development of his chest.

3d. Patient feels weak and feeble; no pain; appetite moderate; sleep pretty good the previous night; bowels open. Omit the anodyne mixture, continue the seneka. Apply one grain of morphia to a small blister on the chest.

5th. Tried the morphia by the endermic method last night, but without effect. Cough straining; expectoration diminished and difficult. Apply two grains of morphia to the blistered surface.

8th. Has slept better the three last nights from the use of the morphia. The cough is less straining; and the matter, which is in small masses, is expectorated with greater facility. Continue seneka and morphia.

10th. Rested well the two last nights, with the exception that he sometimes awakes in a fright. Coughs and expectorates easier. The expectoration consists of ropy pus and mucus. Bowels open; appetite moderate; debility considerable. Continue seneka and morphia. Ordered mutton daily.

12th. Slept badly last night. The morphia being expended, none was applied last evening. The expectoration is diminished and more difficult. No sweats. Continue the seneka.

15th. Has not rested so well since the external application of the morphia was discontinued. Thinks his cough is worse. Continue the seneka; substitute two grains of opium by the mouth for the morphia.

29th. The patient continued to improve up to this date, the eighty-fifth day of the disease; when he was so far recovered as to be discharged from the hospital.

On the 25th of June this patient returned to the hospital, with universal pains and spitting of blood. He was bled, cupped, took several Dover's powders, and was discharged cured in four days.

Remarks.—This case was somewhat like the last, inasmuch as the first symptoms led me to suppose that the lungs were affected, as they generally are in fatal consumption,—that is, with tubercles. The prognosis, however, was more favourable, on account of the age of the patient (forty-four years), and the great capacity of his chest. The morphia employed by the endermic method seemed to act favourably as an expectorant, and lessened the sufferings of the patient. It did not seem to disorder the stomach; and if this should be found generally true, the endermic employment of morphia will be a great resource where the different preparations of opium disagree with the stomach.

Case of Empyema, in which Paracentesis Thoracis was performed.

[Read before the College of Physicians Sept. 29, 1829.]

Peter Williams, aged twenty-two years, was admitted into the hospital of the Walnut street prison, Nov. 18, 1829. He had been ailing about twenty-two days before admission into the hospital, with pain in the breast and cough, and the remedies which had been employed were cupping, warming plaster to the breast, and anodyne medicines for the cough. On the day of his admission he complained of bad cough, with expectoration of slimy mucus at night and pain in the breast and left side. The pain in the side had been severe for about three days, and is aggravated by a full inspiration, which also excites cough. The appetite is good, but his food lies heavy. The pulse is rather full. A rhubarb purge was taken yesterday. Ordered bloodletting ℥xvj, and the exhibition of antimoniated barley water and liquorice mixture.

November 20th. Side is better since the bleeding. Stomach is sick. Bowels open to-day, but not yesterday; no pain in the head; pulse weak. Ordered ten cups to the side and a dose of castor oil; omit the antimoniated barley water for one day; continue the liquorice mixture.

22d. Cough very bad last night. Has a severe pain at the pit of the stomach. Pulse vibrating. Left side feels sore. Stomach not sick. Bowels open to-day and yesterday. Refused to take the oil. Omit the antimoniated barley water. Ten cups to the pit of the stomach. Ol. Ricini ℥i. Substitute a blister to the breast for the warming plaster.

25th. Cough is hard and almost incessant. Expectoration of mucus. Breath short. Bowels not open for two days. Tongue dryish. No appetite. The cups relieved the pit of the stomach. Blister drew well.

Substitute a mixture of prussic acid for the liquorice mixture. One grain of opium at bedtime.

27th. Cough better. Bowels too open. Sleeps pretty well. Pulse jerking. Tongue clean. Long inspiration excites no pain. Appetite very good.

Continue prussic acid and opium. One pint of milk.

29th. Patient drew my attention to a swelling of the epigastrium. Cannot lie on the back or right side without coughing. Suspect water in the chest.

Continue prussic acid and opium. Ordered cream of tartar and jalap.

December 2d. Not so much oppressed, yet the breathing is short and laborious.

Continue the same remedies.

4th. The left side of the thorax is decidedly more protuberant than natural. The ribs are hardly elevated during inspiration. Examined by the stethescope, the respiratory murmur was nowhere to be perceived over the diseased side. Being satisfied that an accumulation of fluid existed in the cavity of the pleura on the affected side, I performed paracentesis thoracis, and drew off three pints and one gill of serum, mixed with pus, of a dirty reddish colour. After the operation the patient expressed himself relieved.

Continue prussic acid and opium. Omit the cream of tartar and jalap. Give twenty drops of laudanum at bedtime in addition to the opium.

5th. Feels weak this morning, but lessoppressed. Bowels open. Thirsty. Laid on the right side and coughed much, being deterred from lying on the left side, under the impression that it would injure the wound. Placed him on his left side, and the cough ceased.

Substitute the liquorice mixture for the prussic acid mixture. Continue the opium regularly at night, and laudanum occasionally.

6th. Laid on his left side about two hours, when, the wound becoming painful, he turned on his back. Slept last night in a semi-recumbent posture. In the night took twenty-five drops of laudanum. Breathing about the same as before the operation. Cough less. Bowels open.

Continue opium and liquorice mixture, and laudanum occasionally. Toast-water for common drink.

7th. Talking puts him out of breath. In the sitting posture there is not much pain. This posture, leaning forward on a pillow, is the most comfortable. Pulse quick and obscure, and weaker on the affected side. Sharp pain before the operation, but not since, except in the wound itself. States that his greatest suffering consists in the shortness of breath and heaviness across the sternum, these symptoms being aggravated at night. Has appetite, but is disinclined to eat, as eating makes him feel worse. Bowels open. Coughed a great deal last night. Expectorates thick mucus. Tongue red, glazed and dry.

Omit the opium, and give fifty drops of laudanum at nine o'clock at night. Arrow-root for food. Continue the liquorice mixture.

8th. Was delirious all night, perhaps from the laudanum. Diminish the dose to thirty drops.

9th. Passed a better night. Coughs less. Tongue paler and moister. Has spells of difficulty of breathing. Pulse on the well side strong and vibrating; on the affected side, obscure. Expectoration is sometimes easy and sometimes difficult. Bowels not open.

Ordered two ounces of castor oil. Continue the laudanum.

10th. The laudanum was omitted last night, on account of the castor oil not operating. Slept less, but was less flighty, and coughed less. At the time of my visit he is sleeping in a sitting posture, with the head reclining on pillows. The breathing is laborious. Back and head move with every inspiration. Left side is bulged out, and the ribs on that side scarcely move. The intercostal spaces on the right side are sucked in during every inspiration. The oil operated four times.

Venesection ℥vi. Continue liquorice mixture and laudanum.

11th. Very ill. Cough very harassing. Preserves constantly the sitting posture. Pulse in right wrist full and throbbing; in left wrist less so. Had a better night than for some nights previously. The left side feels rather heavy, but not so heavy as formerly. Bowels open.

Venesection ℥xii. Continue liquorice mixture and laudanum.

12th. Complains of chills and perspirations. Had a very poor night. Felt very sick when bleeding, but an hour or two afterwards was better and breathed easier. Says he cannot eat any thing but milk. Bowels open.

Continue liquorice mixture and laudanum.

13th. Had a bad night. Bowels not open, and took an ounce of castor oil this morning. Feels a sharp pain in right side.

Venesection ℥xvi. Continue liquorice mixture and laudanum.

14th. Blood drawn yesterday, natural. Dyspnœa very considerable, but less since the last bleeding. Pulse quick, soft, and full, and stronger on the unaffected side. Tongue moister and cleaner. Bowels open.

Ordered a blister to the breast. Continue the liquorice mixture and laudanum.

16th. About 11 o'clock yesterday, during a fit of coughing, the orifice in the side opened, and a quantity of matter gushed out in a

stream. The orifice continued to discharge matter pretty freely during the day, and occasionally through the course of the night, on the occurrence of cough. This morning, whenever the patient coughs, air passes through the orifice, and produces a peculiar sound. The discharge from the side on this occasion was estimated to amount to between two and three pints. After the occurrence of the first gush of matter, the patient was much easier and less thirsty. Had a pretty good night, sleeping nearly till day-light. No fever. Pulse vibrating. Wishing if possible to discharge the matter thoroughly from the cavity of the chest before dressing the orifice, I introduced a cannula into the wound, but without advantage. I then laid the patient on the affected side across two cots, so as to make the opening most depending, and free from any pressure. In this position coughing caused the discharge of about a gill of matter. In order to soak up the matter which was constantly oozing from the opening, I directed a piece of sponge to be applied over it. The blister ordered at last visit was not applied.

17th. Had a bad night. Cough incessant. Complains of great weakness. Has appetite in the morning. Bowels open. Tongue clean, but inclining to be dry. Pulse weak and quick.

Ordered mutton broth. Continue the laudanum, to be repeated if necessary.

18th. Better night. Took a second dose of laudanum about two o'clock. Discharge from the side small.

Continue laudanum. Substitute prussic acid for the liquorice mixture.

19th. Had a good night. Cough not so frequent. Orifice feels sore. Left side generally not painful, but heavy. Appetite very good, but he eats but little at a time. Right side of chest feels very well. Tongue looks pretty well. Respiration and strength the same. Pulse quick, but not full.

Continue laudanum and prussic acid.

20th. This day the patient's term of sentence expired, and having insisted on leaving the prison, he was conveyed to the Alms-house, where he came under the care of Dr Samuel Jackson. He remained in this institution until his death, which took place on the 5th of January 1829. Being interested in his case, I felt desirous of knowing the progress of his symptoms, after he passed from under my care; and at my request, Dr Carter, one of the house physicians of

the Alms-house Infirmary, with the consent of Dr Jackson, was kind enough to furnish me with the following abstract of his case while he remained in that institution. These notes, in connection with my own, present a full view of the case.

23d. A. Hicket, of intemperate habits, was admitted this day. Present symptoms as follows: Very restless. Cannot lie on the left side or back. Skin harsh and dry. Tongue smooth, dry, and very florid. Pulse frequent and irritable. Thirst considerable. Appetite good. Bowels rather constipated. Complains of tenderness in left side, where there is an opening between the sixth and seventh ribs, made to evacuate matter. Matter of a very fetid odour is constantly running from this orifice. Tenderness also over the epigastrium. Has hectic fever morning and evening. On examining the chest by means of the stethescope, the left lung was found to be completely collapsed. Respiration was accompanied by a peculiar resonance on speaking or on inspiration. Right lung healthy. Feet and legs very œdematous. Ordered twenty leeches to the left side. Inject three or four times a day into the orifice equal parts of flaxseed tea and milk. When the leeches are removed, apply to the side fomentations of hops.

24th. Much better. Pain and tenderness of left side diminished. Matter from the aperture not so fetid. Continue the injections, and apply four cups to the upper part of the left side.

25th. Continues to improve. Not so restless. Pulse less irritable. Tongue clean and moist. Pain in side nearly gone. Bowels regular. Continue the injections.

26th. Says that he feels very well. Pulse tense, quick, and frequent. The hectic fever is very much diminished. Constant discharge of a thin watery liquid from the orifice. Harassed with considerable cough. Other symptoms the same.

27th. Tongue is very red at the tip and sides, and furred in the centre. Has no pain. Cough diminished.

29th. Pulse quick and irritated. Tongue very red. Cough not so troublesome. Feet still œdematous. Omit injections and take sparingly of weak wine whey.

30th. Feels better. Pulse same. Tongue very red at point and furred in centre. Continue wine whey.

31st. About the same. Complains of pain at the orifice on coughing, and is much annoyed by the escape from it of fetid air.

Cough considerable, particularly when he lies on his right side. Pulse small, quick and irritated. Has slight fever in the afternoon.

January 1st 1829. Tongue moist and clean. Discharge from the side diminished.

2d. Pulse quick and frequent. Tongue same. Skin moist. Cough very troublesome. Ordered the following mixture:

Acetum opii . .	gtts. xxx.
Mucilage	f3iii.
Syrup	f3i.

M. A table-spoonsful every two hours.

3d. Gradually becoming weaker.

4th. Symptoms very much exacerbated. Skin cold and covered with a cold clammy perspiration. Pulse weak and frequent. Tongue clean, but of a pale colour. Air is constantly escaping from the orifice. Ordered the ammoniated julep and wine whey.

Evening.—No reaction. Complains very much of shortness of breath. Pulse very small and quick. Ordered, in addition to the other remedies, the free exhibition of brandy toddy.

Midnight.—Some reaction. Skin warm and covered with warm perspiration. Pulse increased in volume and force.

5th. Feels easier. Slept a little towards day. Breathing much freer. Cough not so troublesome. The pulse has now tolerable volume. Ordered to diminish gradually the stimulants.

Afternoon.—Symptoms of prostration have rapidly come on. Though freely stimulated, he continued to sink, and died about ten o'clock, P.M.

Autopsis. Both sides of the pleura very adherent and very extensively inflamed. Pneumonia very extensive in left lung, which was completely collapsed. Very considerable effusion in the right pleura and in the air cells of the right lung. Incipient tubercles in the upper lobe of the same lung. Chronic pericarditis. About an ounce of puriform liquid in the cavity of the pericardium, and a deposition of tubercles over the whole exterior surface of the heart.

Thus it appears that the unfortunate patient sunk on the forty-ninth day of his confinement, and thirty-second from the time of the operation.

ARTICLE XIV.—*A case of acute supervening or Chronic Arachnitis, attended with symptoms of nervous irritation without fever. Death in consequence of a fall.* *By* R. LA ROCHE, M. D.

Mr E—— G——, aged about sixty years, of a strong and muscular frame and nervous temperament, acute and intelligent mind, was for a long time subject to symptoms of dyspepsia and to melancholy, *vapours* and other nervous derangements. His habits were I believe always regular; for during a long acquaintance with him and intimacy with his family, I saw or heard nothing, that could lead me to suspect they were otherwise. At various periods of his life Mr G. was subject to spells of nervous irritation, resembling somewhat the diseases known in females under the name of hysteria. About six or seven years ago he was taken with a more than usually severe nervous irritation, attended with slight delirium. These symptoms continued several days, during which he fancied he saw a variety of animals, as well as men and women, walking or dancing in his presence, and even threatening him in various ways.

This attack occurring in the western country, at a place where no medical aid could be procured, he conducted his treatment himself, and made use of baths and refreshing and calming drinks. Under the use of these means he perfectly recovered, and remained, so far as I have been able to learn, free from these symptoms until last year, when, being in Holland, he was seized with a much more violent attack, during which he became completely delirious, and it required great care to prevent him from jumping out of the window in order to escape from the phantoms, assassins, &c. by whom he fancied himself constantly assailed. As probably this, like the former attack, bore some resemblance to mania a potu, and was unattended with symptoms of acute arachnitis, the physicians by whom Mr G. was attended treated him simply by means of large doses of opium. On the eighth or ninth day sleep was at length procured, and a recovery soon followed. Mr G. returned to this country about four months ago free from complaint, and with the exception of a catarrh and occasional slight tertian fevers, the evident remains of an attack of this disease which he had contracted in Holland, continued in the enjoyment of health until the first week in October, when his friends perceived a change in his dis-

position. He became morose, avoided company, appeared irritable, and at times gave evidence of a loss of memory. He complained of rheumatic pains in his lower extremities, for which he made use of alcoholic frictions. His appetite during this time was little impaired. At last, on the 19th of October, the explosion took place. I was called to see him at twelve o'clock of that day, and found him as follows: The muscles of his extremities were all in motion; he was unable, on this account, to remain on his feet or to walk. He could hold nothing in his hands, and it was with the utmost difficulty I could steady one of his arms sufficiently to feel his pulse. While holding my finger on the artery I could perceive a vibratory and continual motion in the muscles. His mind was perfectly sound, though his speech was rather more abrupt than usual. He had not slept the night before, and attributed all this agitation and a little heaviness over the eyes to this circumstance. His eyes were not affected by light: the head and indeed every part of the body was free from pain; but on sitting in bed he experienced some giddiness. The tongue was of a natural colour on the sides and tip, partaking a little of the trembling and agitation of the other muscles, and was slightly furred in the centre. He complained of thirst—loss of appetite; pulse about eighty, and rather hard and full; skin covered in parts with perspiration, but of natural temperature. He conversed gaily about his agitation, and related to me all I have stated above concerning his former attacks.

Finding him opposed, on account of the effects of the treatment pursued in Holland, and from the firm persuasion, that the disease was decidedly *nervous*, to depletory means; but fearing to have recourse, as he desired, immediately to opium, I prescribed an active opening medicine (salts and magnesia) and enjoined complete abstinence from food, and diluent drinks. In the evening I found him rather quieter; had dozed an hour or two; muscles less agitated. This state of tranquillity only obtained however when he remained in bed; every movement—every attempt to walk being attended with a sense of debility in the muscles, on which he seemed to lay more stress than on any other symptom. The medicine had not operated; but every thing indicated that it would soon do so. Pediluvia, rendered stimulating by a portion of mustard in the water, was directed to be used after the medicine had operated; and with a view of calming his nervous system and procuring sleep, pills of camphor and acetate

of morphia were prescribed to be taken through the night until the effect was obtained.

The next morning the patient was better, and was found seated in a chair and *reading the newspaper*. The medicine had operated powerfully; and the mind was tranquil; speech less abrupt; pulse less tense, and about seventy-five strokes in a minute, and skin natural. But although the patient could stand and walk better than the day before, and experienced less vertigo, yet the muscles continued so much agitated whenever he called upon them to perform their office, that he could with difficulty pass from one part of the chamber to the other. As a proof of the great tranquillity of mind of M———, I will state that we conversed together for a quarter of an hour on political and literary subjects, and that during this time his remarks were characterised by great taste and good sense.

Camphor and morphia, ten grains of the former and one-quarter of a grain of the latter, were ordered to be continued every two hours, and only a little boiled rice was allowed for nourishment. At two P.M. he was the same; but at this period he informed me that he was beginning to perceive various kinds of apparitions before him; that he knew, from his experience of former attacks, that these hallucinations would grow upon him; that the next day they would become very troublesome; and that he would soon become delirious. He apprehended, however, no danger from his disease, and was nearly certain he would soon be well.

The patient continued in this state until between three and four o'clock the next morning, when, as he had predicted, symptoms of slight delirium made their appearance. He had slept a few hours, and imagining, that it was day instead of night, and attributing the obscurity to the loss of sight rather than to its real cause, he became alarmed, cried, screamed, &c. and requested I should be sent for. When I arrived, he was already composed, was aware of his error, begged me a thousand pardons for disturbing me, and conversed a few minutes with me quite rationally. Yet at intervals his mental derangement became manifest. He evinced a disposition to get out of bed and walk, which he could now do much better than before, and was more or less constantly troubled with images of dogs, cats, men, &c. floating before his eyes. His pulse was once more active and tense, his tongue foul, but not preternaturally red. There was, as he said, occasionally slight disposition to nau-

sea; but on this I could not be perfectly certain, as he often contradicted himself in giving me an account of his feelings. A circumstance which struck me was that he was aware of the incongruity of his actions and words, and was well aware, contrary to what usually occurs in mental aberrations, that all the fantastic and imaginary objects he constantly saw before his eyes were the effect of hallucination and had no real existence. He attributed them to nervous excitement, and had more than one hearty laugh at the queer state in which the minds of nervous people like himself were occasionally thrown.

The state of his pulse and mind led me to think, that depletion was required; but all my arguments could not induce Mr G. to allow me to bleed him. I was again compelled, therefore, to resort to purgatives, and selected this time a strong infusion of senna, to which I directed half the quantity of valerian to be mixed.

At ten o'clock A.M. the medicine had not operated, and the state of the patient was the same; he had had no sleep; cold applications were directed to the head. Three o'clock P.M. medicine had operated powerfully; patient more tranquil; appetite somewhat better; complains of great debility; the pulse has lost somewhat its hardness; tongue same. A little boiled rice was allowed for nourishment; cold applications were again directed to the head, the direction not having been complied with in the morning. At eight o'clock P.M. patient, though still troubled with apparitions, was apparently free from delirium; he conversed for some time with very good sense on political and other subjects, adverting to his hallucinations with a good deal of mirth; referred them again to their true cause; insisted on accompanying one of his friends to the head of the stairs because he had the night before stumbled in the dark. Yet there was something about his manner which did not seem right, although it could not be appreciable to those less acquainted with him than I was. The medicine had again operated well; the pulse was better; in fact I did not conceive, that there was any thing more to be done than to procure him, if possible, a good night's rest by means of opiates and antispasmodics. Accordingly thirty grains of assafœtida and two of acetate of morphia were prescribed. One half of this was ordered to be taken at bedtime, and the other half one hour after, if the first dose did not produce effect. Leaving him quietly in his bed under charge of his friends and a good nurse, I retired, and heard nothing of him until after three o'clock the next morning, when I was awoke

with the painful intelligence that he had jumped out of the window of his room, situated on the third floor of the house. On reaching there I was told, that he had not injured his body; that the accident had occurred about two hours before in a moment of mental excitement in which he found himself after a sleep of an hour or two; that he had opened the window with a view of jumping out, but was at first prevented by the nurse. Finding it impossible to retain him, she ran out of the room to call for assistance. No sooner had she done this than he flew to the door, locked it, and then without opposition effected his purpose. I further learnt, that he had been carried in by some persons attracted to the spot by his screams and those of the nurse; that in my absence Dr JOHN W. MOORE was sent for, who, finding his system too much prostrated by the shock of the fall to permit bloodletting, and his mind much excited, had administered a dose of laudanum, and that this having produced the desired effect, the patient was quietly asleep. When I reached the house Dr MOORE had retired, and it was not before half past twelve P.M. that we could meet. In the interval I called there several times, but hearing always that he continued asleep, and not wishing to awake him, I neither touched him, nor allowed light sufficient to be let in the room to enable me to see him. At the time of meeting with Dr MOORE, however, hearing that he was still asleep, that he had not stirred in bed since three o'clock, we began to feel alarmed. We walked in, opened the shutters and bed curtain, and saw with astonishment and sorrow that we had before us but a corpse. The appearance of his countenance, and the stiffness of his muscles and joints, plainly indicated that he had been dead for some time—probably at the moment when it was thought he had fallen asleep.

A coroner's inquest was held, who, after hearing all the witnesses, &c. gave a verdict of "death in consequence of jumping out of a three story window in a moment of mental derangement." At four o'clock the examination of the body was made by my friend Dr HORNER, in presence of Dr BELL, Mr DUNBAR and myself, when the following appearances were discovered.

On opening the cranium a large quantity of fluid escaped. The arachnoid on both parietal, as well as on the upper regions, was found thickened, and in some places slightly opach. Other parts of this membrane, as also the piamater throughout, were highly vascular, and between them there was discovered a considerable serous

effusion. The substance of the brain was much softer and more vascular than usual. The ventricles contained a large quantity of fluid, and were, especially the left, morbidly enlarged; so much so indeed, that Dr HORNER and the rest of us were inclined to believe the subject must have suffered at one time from a chronic hydrocephalus. The cerebellum was also very vascular, but presented no unusual appearance. At the lower edge of the falx the dura mater was found ossified in a circumscribed spot.

Back.—On making an incision over the spine, from the neck to the sacrum, a considerable effusion of blood was seen at the lower part of the spine and beginning of the sacrum, not perceptible by any discolouration or swelling externally on the skin. No fracture of the spine could be discovered, and the spinal cord was found healthy throughout.

Abdomen.—On raising the intestines, a very extensive effusion of blood was visible under the peritoneum. This cut, the blood was seen partially coagulated over the region of the iliac veins, extending somewhat upward; but more particularly down into the cavity of the pelvis. No rupture of a large vessel was perceptible, so that we were led to infer that the blood proceeded from the rupture of several small veins.

The stomach was somewhat distended, and contained a quantity of fluid, which, from its appearance and smell, could be easily recognized to be the wine and water and laudanum that had been administered an hour before death. The inner surface of this viscus was of a light ash colour, and the mucous coat so softened in its whole extent, that it was with the greatest ease scraped off with the handle of a scalpel. A portion of the mesentery was ruptured, and an effusion of blood was found between its laminæ. The liver was white and small.

Thorax.—A large echymosis was found in the substance of the diaphragm. The right lung was healthy in its whole extent. In the anterior portion of the left, a cicatrix of the size of half a dollar was discovered; around it a few aborted tubercles were situated. On neither side was there any adhesion of the pleura.

Remarks.—The above case is, I believe, interesting in many points of view, and deserves here a few remarks. It will hardly be necessary to inquire very minutely into the causes of death in this case, as it must appear evident to every one, that in the violent con-

cussion of the whole frame, occasioned by the fall, we discover a sufficient explanation of the fatal termination. As death, however, took place only an hour or two after the accident, and, so far from there being symptoms of concussion of the brain, the mind was morbidly excited previous to its occurrence, it may be supposed by some, that the disease itself exercised some agency in the fatal issue of the case; it will not be improper to offer a few words on this subject.

When the facility with which the complaint, in former attacks, was removed by means of a merely soothing method of treatment, as well as the mildness of the symptoms in the last, are borne in mind, it is not likely, that any experienced physician will feel disposed to refer the immediate cause of death to the disease under which Mr G——— laboured at the time of the accident. Had this not occurred, it is more than probable, that under the use of the means employed, a cure would have been obtained, and that the patient would have been able to return in a short time to his usual avocations. When I say a cure, I must only be understood to mean a removal of the existing symptoms; for dissection revealed to us the existence of a morbid state, on which the recurrence of the delirium and other symptoms depended, and which was too firmly established to be removed by all the depletion that could have been employed, had the patient consented to resort to them, and far less by the narcotics and antispasmodics that were had recourse to. The effects then would probably have been removed; but the cause existing, they would undoubtedly have been liable to return. At no period of the attack were the symptoms of arachnitis,—of mental excitement, carried to such a pitch as to account, (as occurs sometimes in delirium tremens), for the subsequent exhaustion of the vital powers and death. From the history I have given of the case, it appears, that acute delirium only manifested itself a few moments before the fall, and continued afterwards until the laudanum seemed to produce the desired effect: in all about two hours. Could this have been sufficient to exhaust the powers of life? Besides, death took place under such peculiar circumstances—after a fall from so great a height, that notwithstanding the absence of symptoms of concussion of the brain, and the continuance of excitement of the mind, we should feel inclined, even had no internal injuries been discovered on dissection sufficient to account for death, to re-

ject the idea, that the fatal termination of the case was in any way to be referred to the disease under which the patient laboured at the time of the accident.

As regards the influence which the treatment pursued, both before and after the fall, could have exercised on the issue of the case, it is not necessary to inquire here. The former was too simple and palliative to have had in any degree a direct agency in hastening death. In reference to the means employed after the fall, I fear not to say, that considering the condition of the patient—his weak pulse, cold skin covered with clammy perspiration, excited mind, &c. no experienced physician will hesitate to regard them as the most proper, in fact the only ones that could have been used.

From the above considerations we are naturally led to attribute the death of Mr G——— to the fall and to nothing else. But how did this operate? Learning from Dr Moore and others, that the patient, when carried into bed, appeared to have lost the use of his lower extremities, we were inclined to believe that the spine had been fractured, or some of the vertebræ displaced; but, as we have seen, no such thing was found on dissection. Some of the gentlemen present thought the neck of one of the thighs was fractured; but this also was found on examination not to be the case. It only remains to explain this paralysis, if it really existed, as well as pain which the patient is said to have experienced at the upper portion of the thigh, and which I afterwards learnt he attributed to a sword passing through that part, by the concussion of the spine, and by pressure on the nerves occasioned by the blood effused in the cavity of the pelvis and in the lumbar and sacral regions. As regards the suddenness of death, I do not believe we can attribute it to any other cause than the violent jar the body must have experienced by the fall, aided, I have no doubt, by the profuse hemorrhage which took place internally in consequence of the rupture of many veins. A shock sufficiently great to rupture the mesentery, the substance of the diaphragm and of the lumbar muscles, as well as a number of veins in the abdomen, must surely be regarded as sufficient to account for the death of a man. The singularity in this case is, that though the symptoms of concussion of the whole system were apparent, though the pulse was feeble and the skin covered with cold sweat, yet the mind remained for an hour excited, and probably continued so until death closed the scene. I need hardly say, in terminating this part of the present remarks, that it is a blessing for

the patient he died so soon after the accident; since, had he lived several days, the peritoneal inflammation which could not help being occasioned by the effusion of blood into the abdomen, would have been of the most painful kind, and would inevitably have ended in death.

I now proceed to examine what this case teaches us in a pathological point of view. But first let us inquire into the character of the disease, and under what denomination we should place it. Must we regard it as a case of mania a potu? It is to be confessed, that at one period it presented some of the characteristics of this affection: such, for example, as the *apparitions*, which, as is well known, are constant attendants on the latter. But it is to be remembered, that we have no proofs of the patient being addicted to intemperance, or at least to an immoderate use of alcoholic liquors, which, so far as we know, is a sine qua non in the production of the disease in question. Besides, delirium, which is also characteristic of delirium tremens, and without which, therefore, a person cannot be said to be affected with the disease, instead of coming on at the onset of the attack, appeared but partially, and that too at intervals. I doubt also, that in real delirium tremens produced by its ordinary cause, the patient is aware that the apparitions with which he is troubled are only imaginary; that he reasons well on every subject, and is the first to express astonishment at the extraordinary effects of nervous complaints. Yet this was observed to occur in the case before us. Independently of this, the patient, except on the night of the accident, was easily managed and not remarkably loquacious. For my part, I cannot, from the foregoing circumstance, be made to believe that it was a case of genuine delirium tremens, although it approaches it in some respects, and this opinion is strengthened by the knowledge, that similar nervous symptoms may and do occur in cases where it is impossible to refer them to that disease. If I am not deceived, we are justified in referring this case to the extensive class of what have been denominated *nervous complaints*, arising, in individuals of a nervous temperament, by the operation of moral and other causes, and independently of ardent spirits. If such a combination of symptoms were to occur in a young girl, we would immediately pronounce them to depend on *hysteria*, and no one would dream of regarding the case as one of delirium tremens. Now it does not appear very improbable, that the whole train of these phenomena may occur in a male to whom nature has imparted a ner-

vous and excitable temperament. He has no uterus, it is true, to excite the nervous system in the way peculiar to hysterical diseases; but the uterus is not the only organ capable of producing such effects, and in many instances the liver, stomach, &c. appear to be the seat of the primary irritation, which when transmitted to the brain and spinal marrow give rise to those symptoms. Nor is it a rare circumstance to find the brain or its membranes idiopathically affected, and occasioning, without the concurrence of any other part, the most diversified trains of morbid phenomena, denominated in females hysterical, and in males by other names. If, in opposition to what we have said, the reader is inclined to regard the case as one of delirium tremens, he will be forced to admit, at the same time, that this disease is not, as is too often affirmed, dependant on a simple nervous excitement of the brain; but arises, at least sometimes, from inflammation of the meninges.

Be this as it may, however, it appears to me very certain, that the above case gives us several good pathological lessons. The former attacks of the same disease which the patient experienced were called *nervous*, and treated as such by the physicians who attended him. It never seemed to have entered their heads for a minute, that the symptoms they were called to combat depended on an inflammation of the meninges, and yet dissection revealed to us the existence of a chronic inflammation of the arachnoid, which in all probability was the result of the acute forms of the disease supervening at every repetition of the complaint. I am inclined to refer the whole train of nervous symptoms to this condition of the arachnoid; because it is not likely, that such a cause could exist without producing, to a greater or less extent, its ordinary effects; and because to the chronic inflammation there had been superadded an acute one of the same membrane, to which must necessarily be referred the last attack. I have called these morbid appearances of the membranes of the brain, in the present case, a *lesson;* because they indicate the impropriety and danger of invariably attributing *nervous* complaints merely to a vaguely defined derangement of the nervous system, and of refusing to admit, that they depend often on an inflammatory condition of some parts of this system. I have not the least doubt, that had any one told some physicians that the symptoms Mr G——— presented depended on this condition of the coverings of the brain, they would have regarded this view of the pathology of the disease as contrary

to common sense. And yet we have the proof that this view is the most correct. Without wishing to deny that simple nervous irritation may exist and give rise to a fearful train of symptoms, I cannot withhold the expression of my opinion, that when long continued or frequently repeated, such symptoms usually depend on something more than this cause.

Leaving now the contents of the cranium to examine those of the other cavities, we find first, that in a patient long affected with dyspeptic symptoms, the mucous membrane of the stomach bore the most evident marks of a chronic inflammation. This again I hold in the light of a pathological lesson, at least for many physicians in this country, who generally refer all dyspeptic symptoms to an undefinable derangement of the functions of the stomach, without an inflammatory affection of the mucous tissue. No one is better aware than myself, that some cases of dyspepsia are dependant on gastralgia, and not inflammation; but at the same time I am disposed to believe, that in many cases all the symptoms referred to this simple derangement of function—to this nervous irritation, depend on gastritis. The difficulty is to distinguish one case from the other; but with care, a physician not too exclusive in his views may learn to do this very readily. In the present instance, the symptoms could not be referred to any other cause than the alteration in question, unless we admit, that such a condition of the mucous membrane of the stomach may exist without producing any peculiar symptoms, and that it merely existed simultaneously in the same part with another complaint, giving rise to the dyspeptic phenomena; an opinion which I confess I could with difficulty be made to adopt. That this softened state of the mucous membrane was an effect of chronic inflammation, I need not attempt to show, as it has been proved over and over again to be so by the best pathologists of the day. All I will say on the subject is, that it cannot be considered in the instance before us as a cadaveric effect, or as the result of the action of the gastric juice, since it was found in less than twelve hours after death, a time too short to allow it to be referred to the former cause; and because the stomach was filled with liquids drank, which would have tended to shield it from the action of the juice. Besides, the morbid effect in question extended to the upper parts of the viscus, which could not be touched by the juice, even were this capable of producing such a result.

A circumstance that merits attention is, that digestion should have been carried on in a stomach so diseased; for although the patient was a long time affected with dyspepsia, he eat in tolerable quantity, and was rather fleshy than otherwise.

I have not been able to learn whether the patient was ever affected with symptoms of phthisis capable of accounting for the appearances found in the lungs.

Quarterly Summary

OF

Medical and Surgical Intelligence.

I. ANATOMY.

1. *Triple Origin of the Vertebral Artery.*—This artery, it is well known, occasionally springs from two roots; to wit, sometimes on the left side, from the arch of the aorta and from the subclavian; at other times on the right, from two different points of the subclavian. Professor MECKEL (in a subject aged thirty-two) lately saw it spring from three roots. The two principal roots sprung immediately from the right subclavian, at the distance of half an inch from each other. The deepest seated one came from the anterior surface of the subclavian, and was larger than the normal root, which rose from the anterior surface of the trunk, and proceeded to the foramen of the transverse process of the sixth cervical vertebra. Their junction was effected immediately above the fifth transverse apophysis; and a line higher, but still below the entrance of the fourth intervertebral foramen, they were joined by the third branch, which detached itself from the lower thyroid artery. Above the fourth transverse process the vessel proceeded as usual.—*Journal des Progrés.*

2. *Monster.*—At a sitting of the Academy, on the 25th of May, M. GEOFFROY SAINT HILAIRE announced the existence of a singular monstrosity. It was born at Sassari in Sardinia, in March 1829. The peculiarities are, that this child, a female, has two heads and two bodies united into a single trunk at the epigastric region. It has four arms, and is still living. Not the least curious part of the communication relates to the precautions taken for its safety by the church, each of the heads having been separately baptized, the one by name Rita, the other Chistina. Rita seems to be unwell. They are now alive and exhibited at Paris.—*Revue Medicale, June* 1829.

BUCHANAN, in his Rerum Scoticarum Historia, gives an account of a double monster that lived under the reign of James the third. It was single below the umbilicus, and double above. The king had it carefully educated, and it made rapid progress in music. The two heads learned several languages, and disputed questions with each other; they even sometimes fought together. When the lower body was tickled, both the individuals felt it; but when one of the bodies was irritated, the other was not conscious of it. It died at the age of twenty-eight years, one body having died several days before the other.

We have lately seen the Siamese boys, who are united to each other by their xiphoid cartilages, and the description of which has been so generally copied into the newspapers as to preclude the propriety of any further notice of them here.

The same gentleman, GEOFFROY SAINT HILAIRE, gave an account of the case which follows:

A child, at the full time, was born at Paris on the 26th of April last. The length from the feet to the eyes, for there the measure stopped, was found to be twenty inches. The brain-case (boite cranienne) and the brain also, were wanting; nevertheless, the cranial bones were not wholly absent, but they were very small, and arranged circularly. In place of the encephalon was found a mass of red fibrous matter placed on the basis of the bones of the cranium, and surrounded with the bones of the vertex. The rest of the child was not only perfect and fully developed, but the infant was of extraordinary beauty.

M. GEOFFROY supposed, from his theory, that the mother must have received a violent blow during her pregnancy, and he did not hesitate to assert that she must have received, probably a violent kick, at about the third or fourth month of her pregnancy, so that the fœtus then sustained an organic lesion, which occasioned this deformity. Dr BREON, (who furnished him with the specimen), wishing to satisfy himself as to the correctness of this opinion, went to the mother, and was by her assured that she had been brutally kicked on the right side of the uterine region. Now, a blow in front would destroy the fœtus at once, but a blow on the side, in consequence of the yielding nature of the opposite side, might injure it only so far as that its subsequent organic developments might be violated and impaired.

The blow had been inflicted by a *quondam* lover, who was affronted with her for having married another man. The brute had been prosecuted, but the affair was made up. By investigating all these circumstances, Dr BREON found that the conception took place June 19th 1828.

The kick was received November 17th.

The child born, April 26th 1829.

Total duration of the pregnancy, two hundred and eighty-two days.

From the above it would seem that, near the end of the fifth month, the fœtal head, being injured by a blow, ceased to be developed, while all other parts of the body, having received no injury, proceeded to acquire the proper degree of perfection.

II. PHYSIOLOGY.

3. *Capacity of the Lungs.*—We are indebted to *the Edinburgh Med. and Surg. Journ.* (*from the Archiv. fur Anatomie und Physiologie*), for the following statements in regard to the capacity of the lungs; they show, at least, how widely the physiologists differ among themselves. According to the experiments of JURIN, forty cubic inches of air are expired at each natural expiration, and two hundred and twenty by a violent one. GOODWIN thought that one hundred and nine cubic inches remain, after a natural expiration, in the lungs, and fourteen are introduced by a natural inspiration. MENZIES procured forty for each natural inspiration, and two hundred for a forced one. ABERNETHY estimates each natural inspiration at twelve; KITE at seventeen; while a forced inspiration, after a forced expiration, introduces two hundred, and the air remaining in the lungs after a forced expiration is estimated to amount to eighty-seven cubic inches. JURIN admits twenty, and DELAMETHERIE only from four to six, as the amount of a natural inspiration. Sir HUMPHREY DAVY thought that forty-one are contained after a forced, one hundred and eighteen after a natural expiration, and thirteen more after a natural inspiration. Dr BOSTOCK's opinion is that two hundred and eighty remain after a natural expiration, forty are added by a natural inspiration, and if we add ninety more for a forced inspiration, the lungs will contain four hundred and ten cubic inches of air. CAVALLO adopts thirty inches as the amount of a natural inspiration when the respiration is performed eleven or twelve times a minute; and ABILGAARD estimates a natural inspiration at only three inches. Dr HERBST of Gottingen lately took up this subject, and performed numerous experiments in relation to it: he used a graduated glass bell-jar, capable of holding three hundred and sixty-seven cubic inches, (French measure), standing in a vessel of

water, and having at its summit a wide tube and stop cock, to which was attached a glass tube of the shape of a horizontal S. (ꝏ)

Various individuals, by practice, soon learn to breathe in this jar with the same ease as in the open air: the inspiration through the tube caused the water to rise in the jar, and the cubic quantity was ascertained by reference to the graduated scale. The verification was easily effected in any case by causing the individual to make an equal number of expirations into the jar, when previously filled with water.

The quantity of air inhaled by short people was found to be usually from sixteen to eighteen inches, and in those of ordinary stature from twenty to twenty-five. MENZIES' estimate of forty inches no man could maintain for a *short* while, without effort and uneasiness.

The extreme capacity of inspiration and expiration differed much in different individuals. A healthy man, twenty-two years old, and five feet ten inches high, after a full expiration, inspired one hundred and eighty-four inches, and after a full inspiration, expired one hundred and eighty. A delicate young man, nineteen years old, could not inhale more than ninety, after the fullest expiration. A stout lad of sixteen, and five feet two inches high, after a full inspiration, expired one hundred and sixty inches. A little man, twenty-two years of age, and of the same stature, expired one hundred and forty-four. A little Jew, of the same age, one hundred and twenty. Fat men had commonly less capacity than others. Two stout healthy fat men, one twenty-seven, and the other thirty years of age, could not exceed one hundred and forty. The greatest capacities which Dr HERBST had occasion to notice, were two hundred and thirty-two, and two hundred and forty-four cubic inches; the former, by a powerful young man six feet high; the latter, by a very powerful broad chested man of medium height. The effect of tight clothes was very striking; one who inspired eighty inches when dressed, inhaled one hundred and six when undressed, and his forcible efforts shewed a difference of one hundred and twenty-six when dressed, and one hundred and eighty-six undressed. The difference in another, between the dressed and undressed state, was fifty and ninety-six, and one hundred and thirty and one hundred and ninety. In women, the capacity of the lungs is inferior to that of men: a young woman of eighteen years expired one hundred and six inches after a full inspiration; another nineteen years old, one hundred and twenty inches. Stout women of about thirty expired from one hundred and thirty to one hundred and forty-four.

4. *Dr Wedemeyer on the Circulation.*—Dr WEDEMEYER published a book at Hanover, in 1828, on the subject of the circulation. The following are some of the results obtained by him.

1. In the natural state of pulsation of the arteries, the sort of contraction obtained by Dr HASTINGS, by the application of stimulants, and noticed by JOHN HUNTER and some other physiologists, can never be observed.

2. BICHAT and PARRY are right when they assert that at each pulsation there is always a slight augmentation of the calibre of the artery; but this increase is so slight that it can be with great difficulty appreciated.

3. All the phenomena of the arterial pulse may be imitated by injecting with a syringe, successive jets of water into the arteries, even several hours after death.

4. The pulse is caused entirely by the impulsion communicated by the heart to the blood; an impulsion by which the artery is partly dilated and partly moved from its place.

5. All the phenomena of the arterial circulation may be referred to the elasticity of the coats of this order of vessels.

6. Lastly, the great arteries contribute to the movement of the blood only in this, that they re-establish, or return by means of their elastic coats, the force employed in dilating them.—*Archives, Aug.*

In the Archives for September there is a continuation of the notice of Dr WEDEMEYER's work. Dr WEDEMEYER, says the writer in the Archive, seems

inclined to adopt the singular opinion, omitted by GRUITHUISEN, DOLLINGER, and OESTERREICHER, on the origin of the blood-globules, which is, that they are, in great measure, formed of globules detached from the parenchyma of the various organs. These *savans* maintain that the globules may not only be seen passing from the *last capillaries* into the substance even of the tissues in which the vessels are distributed, but also that the globules, which for a certain time had constituted part of any tissue, may be seen returning to the general circulation by entering the nearest capillary vessel: whence they conclude that the blood is elaborated in the proper parenchyma of the organs. Dr WEDEMEYER, admitting that the chyle contains globules, and that it is the manifest source of nutrition and growth, can not deny that it must play a principal part in the hæmatosis—yet remarks that, nevertheless, the globules are not immediately formed there, but only after having undergone some preliminary metamorphosis in the substance of the tissues.

For our own part, we have always supposed that if globules enter as a component or constituent part into the chylous fluid, and do not find their way into it by accidental absorption or transfusion, the absorbent vessels must be regarded as possessed of the power of communicating, if not the first, almost the very first vital properties to dead matter. A man may dine on a boiled potato or a roasted turkey, both of which specimens of matter are doubtless as completely divested of life as any stone or clod; and in less than two hours a good part of the potato or turkey shall be found restored to the enjoyment of vital properties as chyle globules, to be soon rendered more vital as blood globules, and perhaps to attain to an additional grade by being deposited as component part of a tissue; now the change from the state of boiled potato to that of retina, or sympathetic nerve, or medulla oblongata, like a succession of *avatars*, leads only to perfection, and if we hold to our solidism, we shall continue to believe that the state of *deposit* as tissue is the highest vital state to which matter can attain; consequently, the blood globules, being less vital, less perfected, are not identical with the globules of the ultimate fibre; we have reason therefore to believe that the blood globules are not constituted out of the detritus of our organs, or their effete portion.

In regard to the structure of the minute vessels, Dr WEDEMEYER says that the white elastic coat, so visible in the large arteries, accompanies the small branches, and is discoverable in tubes whose callibre is only one-sixth of a line; but in certain states of minuteness, both the elastic and lining coats disappear entirely, and the small vessels are then only so many canals, formed in the substance of the tissue, and wholly without any proper membrane, or membrane of their own; their coats consisting simply and solely in the tissues in which they are distributed. This opinion he attempts to fortify in the following manner: 1. It is impossible to discover, even with the microscope, any membrane interposed between the parenchyma of the tissue and the blood that moves in its capillary vessels. To this it might be objected, that the vessels are perfectly transparent when reduced to so small a size, (even the large veins are translucent) and consequently they cannot be seen, while the opaque blood in them is clearly seen. The pericardium is said to be so transparent that the heart is visible as clearly through it as the iris through the cornea. 2. The facility with which certain globules are seen to detach themselves from the current, or mass in which they were moving, and go to mingle with the globules which constitute the adjacent tissues. This we cannot adopt as proof of a parenchymal circulation, inasmuch as we have often with the microscope seen that a vessel capable of admitting only one globule into its calibre, has suddenly become enlarged so as to admit two or more in rank; and also, a vessel freely admitting a stream of globules, in what may be called single file, has become suddenly so contracted as to deny entrance to them entirely; it is this liability to alternate enlargement and diminution that has probably deceived both Dr WEDEMEYER and his supporters. 3. The rapidity with which the blood opens to itself new passages in the midst of the tissues. 4. The impossibility of conceiving how nutrition and absorption should be effected through the parietes of vessels. Dr WEDEMEYER, in our opinion, removes no difficulty by supposing a parenchymal

circulation. When blood or serum is extravasated, we know very well that the result is an ecchymosis or anasarca, which is slowly removed by a long process of absorptions; and yet the gentleman leaves ten million capillary vessels opened in the midst of all the tissues, to pour out their fluid ad libitum. The thought is one that we cannot entertain for a moment.

It is best to adhere to the ancient doctrine, that extravasated blood is blood escaped from its vessels; if Dr WEDEMEYER's opinion be correct, we cannot conceive how the blood in a blushing cheek, which ought to be considered as extravasated, could so soon give place to, or succeed to a deadly paleness. Let us not *finesse* too much in anatomy, it is enough to play *ad libitum* in our pathology and practice. We should be glad to retain one part of our science in the domain of those that are denominated exact.

5. *Galvanism Developed by the Nerves.*—The last Journal des Progrés contains an article from the *Annali Universali*, of May 1829, by Dr BERAUDI of Milan. Dr BERAUDI states, that on the 24th of November 1828, at nine o'clock A.M. having heated his chamber to fifteen degrees of Reaumur, he exposed the right crural nerve of a rabbit, and having cleaned away the blood, he stuck into it three small and fine iron needles, separated from each other by a lamina of lac fixed horizontally on the upper extremities of the needles. The rabbit manifested symptoms of great pain, and in a quarter of an hour the needles had acquired the property of attracting small bits of paper. He afterwards stuck the same needles in the same place, and when they were withdrawn, after the same period, he was astonished to find that they would attract iron-filings, while they had no effect on the small bits of paper.

2. At eleven o'clock on the same day he tried the same experiment on another rabbit, without obtaining the same success. He found that in proportion as the frequency of the respirations diminished in the rabbit, so did the magnetic property also diminish; in consequence of this, he introduced air into the animal's lungs, by means of a bellows, and in ten minutes the magnetic property was found to exist in the needles.

These experiments led him to infer, that the magnetic property communicated to the needles, was in a direct ratio to the contact of the blood with atmospheric air in the lungs. Having communicated with Mr ROLANDO, he advised that the experiments should be repeated, but with the precaution of choosing different days for this artificial respiration.

3. On the 28th of November, at nine A.M. and in the above mentioned temperature, he made several experiments, the general result of which is, that when he caused the animal to respire oxygen gas, the magnetic property of the nerves was very considerable, less with hydrogen gas, and with azote null.

4. Having divided the spinal marrow of a rabbit, between the third and fourth cervical vertebræ, he applied the apparatus of needles above described to the crural nerves, and could observe no magnetic properties in them; but when he had made the animal respire a certain quantity of oxygen gas, the magnetic phenomena were observed.

5. On the 5th of January 1829, at five P.M. M. BERAUDI exposed the right optic nerve of a rabbit, and stuck one needle into it; and having removed it in eight minutes, found it to yield not a single magnetic phenomenon. He then made the animal respire oxygen by means of a bladder and canula, and afterwards hydrogen and azote, with similar results. At six o'clock, the same needle being implanted into the crural nerve, and the animal being made to respire oxygen gas, he found that the magnetic property was developed in the needle, but ceased to exist after he had cut the spinal marrow between the third and fourth vertebræ.

In another experiment, he found that when the crural nerve was either tied or cut, no magnetism could be discovered in a needle beyond the ligature or lesion.

He also cut off a crural nerve and separated the two cut extremities to the distance of four lines from each other. Still the magnetic property was manifested, although in a slight degree, in a needle fixed to the lower segment. He

satisfied himself that this was owing to the propagation of the magnetic power *at distance*, by observing that it ceased when the animal was made to respire hydrogen and azote.

If, as it is generally agreed, the galvanic fluid is capable of developing magnetism, particularly in iron, and that these two fluids are identical, the following corollaries may, in the opinion of Dr Beraudi, be deduced from his experiments.

1. That electricity is developed in the nervous system. 2. That this adds another datum to the theory of professor Rolando. 3. That respiration adds great power to the development of the galvanic fluid in the nervous system, and, probably, to the development of the nervous fluid itself. 4. That the galvanic fluid is not developed in the whole nervous system, but perhaps only in the cerebellum, agreeably to the opinion of professor Rolando. 5. Finally, that the olfactory and optic nerves do not produce an atom of this fluid.

6. *Dr Lee on the Functions of the Liver and Intestines in the Fœtus.*—Dr Lee, in the Philosophical Transactions of London for 1829, attempts to prove that the fœtal liver is the organ for supplying fœtal nourishment, by means of an albuminous matter which it secretes, and which undergoes digestion in the bowels.

Dr Lee found that, in a fœtus of eight months, and eighteen inches in length, the small intestines were nine feet six inches, and the great intestines two feet long. The intestinal canal of a fœtus at full time is eleven feet in length.

The contents of the alimentary canal, examined in more than twenty fœtuses, and analysed by Dr Prout, were found to resemble those of the adult. The meconium begins to appear as the bowel approaches the colon, and contains no albuminous matter; while it is very abundant, on the contrary, in the upper bowels, and particularly about the entrance of the choledic duct. As the fœtal stomach contains no albuminous matter, as it is very abundant in the absorbing portion of the alimentary tract, and is wholly absent in the colon or cloaca, the inference may be drawn, that albumen is derived from the pancreas, the duodenum, or the liver; but as the pancreas is a very small organ, and as the duodenum cannot, in all probability, both secrete and absorb nurtiment, the liver might be looked to as its source. In two instances a small quantity of matter of a straw colour, resembling that found in the duodenum, was detected in the choledic duct, and being carefully treated, exhibited properties more distinctly albuminous than that of the bowel. We may take liberty to remark, that this discovery, if it deserves to be so considered, does not settle at all the vexed question of fœtal nutrition, but only one of the steps thereof. Whence is the material derived which is thus separated by the liver?—*Ed. Med. and Surg. Journal, Oct.*

7. *Pulmonary Insufflation for Asphyxia.*—In the Journal de Physiologie, of M. Magendie, for April 1829, is a Report by M. Magendie on Le Roy D'Etialles' memoir on insufflation of the lungs as a remedy in the asphyxia of drowned persons. We noticed in a volume of this Journal, some experiments by Magendie on the effects of insufflation of the lungs in various animals, from which it appears that the air cells are liable to overdistention and rupture by an inconsiderate application of force in such cases. M. Magendie says that air forcibly impelled into the lungs most commonly tears their delicate tissue, escapes into the cavity of the pleura, and forces and presses the lung towards the upper part of the chest, so as to impede or obstruct the function of respiration; and that death, in this case, takes place, as it does in wounds penetrating to the cavity of the thorax, and allowing a continued ingress of atmospheric air: that is, death depends on the want of expansion of the lung.

On opening the bodies of animals killed by pulmonary insufflation, the diaphragm was found presenting an elastic tumour, convex towards the abdomen. If air be injected into the pleuritic cavity of an animal by a tube passed between

two ribs, the phenomena presented in its death are the same as those occasioned by pulmonary insufflation.

In one of the experiments, where death was occasioned by insufflation of the lungs, air was found in bubbles in the vascular system.

Dogs commonly withstand the destructive influence of pulmonary insufflation; a circumstance which is attributed by M. MAGENDIE to the superior power of resistance of their pulmonary tissue.

The author asks whether there is in the human lung more resemblance, in regard to resisting power, to that of the dog or that of the sheep. We cannot make experiments, says he, on the living, but luckily Mr LEROY is acquainted with a case in point. A young man playing with his sweetheart, took it into his head to blow into her mouth while he held her nose: the effect was a distressing feeling of suffocation, which lasted several days, and frightened the actors of a scene that was intended only for fun.

In the dead bodies of adults and old men Mr MAGENDIE has, by insufflation, succeeded in rupturing the pulmonary tissue, and occasioning an effusion of air between the pleura pulmonalis and the pleura costalis: in new born children that had lived only a few hours, and in fœtuses, he could not succeed in this experiment, being only able to occasion a few bullæ to exhibit themselves here and there on the surface of the lungs. Hence he infers that there is a similarity as to resisting power between the lungs of children and fœtuses and those of the dog.

From all that has come to our knowledge on the subject, it appears that insufflation of the lungs, carelessly performed, (*sans menagement*), may occasion the death of the subject; and yet there is no question here as to the utility and propriety of resorting to that process in cases of asphyxia.

It is about thirty years since the method of insufflation by bellows has been introduced, and generally employed; the result has not been favourable. From 1821 to 1826 inclusive, eighteen hundred and thirty-five drowned persons have been taken out of the water at Paris; of these three hundred and sixty-eight received assistance, of which number only two hundred and eighty-three were restored to life; while in the six years from 1772 to 1788, out of nine hundred and thirty-four drowned persons, or cases of asphyxia, eight hundred and thirteen were saved. Perhaps the violence used by the bellows may, in rupturing the lungs, have occasioned a part of this great disproportion.

III. PATHOLOGY.

8. *Caries of the Alveolar Process of the Upper Jaw, with the Reproduction of the Jaw Teeth, after its Cure.*—The following case is related in RUST's Magazine, b. 29, h. 2, 1829. H. S. a female thirteen years of age, who had suffered repeated attacks of scrofulous disease, which, though somewhat obstinate, yielded at length to medical treatment, was seized with severe pain of the left portion of the upper jaw, affecting also the teeth of the same side. The left cheek became swollen, and a hard tumour appeared upon the gum, of the size of a hazelnut. The disease being supposed to be simply a gum-bile, no professional aid was procured for fourteen days. During this time the alveolar arch, internally, was protruded in such a manner as to form a convex swelling within the mouth. Dr SAMUEL, of Conitz, was now requested to see the patient. He concluded it to be a case of suppuration of the antrum, which diagnosis was strengthened by the circumstance of the patient discharging, in sneezing, from the left nostril, a fœtid purulent matter. The third molar tooth was extracted, and the bottom of its socket was pierced with a trochar; a quantity of putrid pus was discharged. The perforation was kept open by means of a small plug, which was subsequently gradually enlarged. Into the antrum was injected a decoction of bark, with honey of roses and tincture of myrrh, part of which passed out at the left nostril. The first, second and fourth molar teeth becoming loose, were removed at differ-

ent periods. Soon afterwards a portion of loosened bone presented itself at the opening made into the antrum, which was extracted, the opening being first enlarged. It was about the size of a silver groschen, and of an irregular square shape. A similar portion of bone was subsequently extracted. The cure was effected in about six months by means of the foregoing injection and the administration of rubia tinctorum and bark. The jaw with its alveolar process resumed its normal shape, and within the first year after the cure other teeth were cut in the place of those which had been removed.

9. *Case of Metastasis.*—C. H. twenty-one years of age, came to the Royal Hospital of Berlin on the 3d of January 1829, in consequence of an inflammation of the throat consequent upon an exposure to cold. When admitted he was also labouring under gastric disease. Both affections were immediately relieved by an emetic; and by the administration of a decoction of althæa with muriate of ammonia and tartar emetic were entirely removed in two days. On the 5th of January a slight fever presented itself, but was of short duration and followed by an eruption of specks intermixed with distinct papulæ. This disappeared in two days, and for the three days subsequently the patient remained to all appearance free from disease. On the 11th there occurred a severe chill of an hour and a half duration, followed by a violent fever which lasted three hours, and a perspiration of similar continuance. The patient now felt perfectly well, with the exception of some degree of weakness. On the ensuing day an erysipelatus inflammation of the left cheek appeared, which in forty-eight hours produced desquamation of the cuticle; this was followed by a pain of the soles of both feet, the parts affected being swollen, tense, and very red. Two days later this affection of the feet diminished in intensity, and the patient complained of a painful affection of the hip. The day after of a pain in the outer part of the right breast and a very severe pain of the external portion of the right thigh. A copious diarrhœa next occurred, which, together with the pain of the hip and breast, after a few days disappeared. The pain of the feet and right thigh continued and appeared to antagonize each other; when the one increased the other diminished in intensity. The affected part of the thigh presented decided symptoms of a deep seated inflammation. In the commencement the patient took a solution of sal-ammoniac, as already mentioned; when the eruption occurred, a diaphoretic mixture was directed, and a few days subsequently extract. aconiti. Leeches were applied for the pain of the feet, and the parts wrapped in flannel. The affection of the thigh was treated by frictions with the ungt. hydrarg. and emmolient poultices; under their use an abscess was formed, which was soon healed by the combined use of calomel and aconite. General perspiration, as well as copious local sweats, finally occurred, "which were considered as critical, and indicated the rheumatic nature of the disease." The pain became now daily less severe, and by the end of January the patient was convalescent. The above case we have condensed from Rust's Magazine, f. d. Gesamm. Heilk. b. 29, h. 3, 1829.

10. *Hypertrophy of the Heart.—Ossification of its Valves.—Aneurism and Ossification of the Aorta.*—In Rust's Magazine, f. d. Gesamm. Heilk. 1829, we have the following case: A man forty-four years old had laboured for eight weeks under all the symptoms of hydrothorax, which had latterly increased to so great an extent that suffocation appeared inevitable. At the same time there occurred extensive edœma of the lower extremities. The little advantage which had been derived from the remedies already employed, and the necessity there was of immediate relief, together with the good effects which had been experienced from incisions in the lower extremities in similar cases, induced the gentleman having charge of the present patient to make trial of them. Accordingly two incisions, each three inches long, were made through the skin upon the inner side of the leg. By these a large amount of fluid was discharged, and the relief was so considerable, that the patient was able to assume a horizontal position, and to enjoy a quiet sleep. Internally, he was directed to take a mixture of ext. lactucæ and digitalis, with pills of sulph. stib. aurant. scill. et ammoniacum. An inflam-

mation soon, however, occurred at the part where the incisions were made, and extended over the whole limb. This gave rise very speedily to suppuration of the cellular membrane on the inner surface of the leg. The matter was evacuated by deep and extensive incisions, and proper remedies were applied. While the discharge from the leg continued, the disease of the chest appeared greatly relieved, but subsequently, the dyspnœa, restlessness, and the other symptoms returned with increased violence, under which the patient at length sank. *Sec. Cadav.*—In the chest was found a small quantity of fluid; lungs entirely sound, with the exception of a few adhesions. The pericardium was greatly distended with fluid. The heart very much enlarged, and its parietes considerably thickened. The semilunar valves were ossified. The descending aorta was aneurismal and ossified. The other organs of the thorax and those of the abdomen were without disease.

11. *Morbid appearances in the Brain, after frequent attacks of Apoplexy.*—The wife of a labourer, forty-one years of age, of long continued intemperate habits, had experienced repeated attacks of apoplexy, after the last of which she had remained imbecile, and subject to occasional fits of epilepsy. During an attack of the latter she died suddenly. On opening the head, the bones of the cranium were found to be extremely hard, and of unusual thickness. The brain was of medium size, free from congestion and of normal consistency. On cutting into the substance of the organ, there were discovered, at the external part of the medullary portion of the right hemisphere, on a level with the thalamus nervi optici, two cavities, of the size of a small bean, and filled with a clear fluid. They were both surrounded by a coat of firm consistency, similar to a serous membrane; this was intimately connected by its exterior portion with the surrounding substance of the brain: each could, however, be dissected out, in the form of a complete sac. Their internal structure was cellular. Near to these, but more internal, and higher up, there was found a greyish or red gelatinous mass, very distinct from the medulla of the brain; this had already begun to be surrounded by a covering similar to the former. The ventricles were loaded with water. The pineal gland contained a large sand like concretion. A considerable amount of fluid escaped from the spinal cavity. The viscera of the thorax and abdomen were sound. The stomach was however contracted to the size of the duodenum. The foregoing case is related in Rust's Magazine, Band xxx. Heft 1, 1829.

12. *Acute periodical Asthma of Miller.*—By some recent writers, remarks Dr Muhrbeck, in the May number of Hufeland and Osann's Journal, the acute periodical asthma of Miller has been considered to be the same with croup, or at least only a variety of the latter. This, however, is certainly not the case, as the following fact will prove.

A healthy robust lad, fourteen years old, was exposed to cold January 28th. According to the statement of his mother, he was suddenly attacked in the evening on retiring to bed with a sense of suffocation and a peculiar sonorous cough. At twelve o'clock the same symptoms recurred with increased violence. I was called, and saw the patient immediately. He was sitting up in bed, almost stupid with sleep: complained that they would not allow him to rest, and requested I would order him something to prevent a return of the cough, or it would certainly destroy him. His pulse, &c. presented at this time no indications of disease. Though I perceived at once that this was a case of the acute asthma described by Miller, I was, nevertheless, desirous of witnessing a paroxysm before administering any medicine. I directed, however, in the mean time, a solution of assafœtida in mint water and syrup to be prepared, together with powders composed each of one grain of musk; about three o'clock a paroxysm more violent than either of the previous occurred. The cough resembled the barking of a large dog, the face became swollen as though upon the point of bursting, and the vessels of the neck tumid. The eyes rolled convulsively; the pulse at the wrist was hardly perceptible. I apprehended immediate suffocation. In the

course of a few minutes the violence of the symptoms gradually abated and the patient sank exhausted on the bed. In about six minutes he was, however, able to speak, and entreated that I would not allow him to suffer another attack. The respiration was now perfectly free and natural, and the lad appeared again entirely free from disease. One of the musk powders and a dose of the assafœtida were alternately prescribed every half hour. At about six in the morning a light paroxysm again occurred. The remedies mentioned were continued for some days, but at greater intervals. The child has remained to this period free from another attack. So rapid a removal of the disease, adds the Doctor, would not have occurred, had it been a case of croup; at least with the same remedies. The disease under which this patient laboured evidently consisted in a sparmodic affection of the vocal nerves. The treatment usually employed in croup, would in such cases be very generally fatal.

Though we do not exactly understand the pathology of Dr M. as given above, yet we believe the disease he has described to be of very frequent occurrence, and in this city, at least, ordinarily confounded with croup. Supposed cases of the latter, described by respectable individuals as having been promptly cured by small doses of ipecacuanha, the warm-bath, a snuff plaster on the thorax, &c. we believe to have been cases of the acute asthma; in other words, a spasmodic affection of the glottis.

13. *Sounds produced by the healthy action of the Heart.*—Dr DAVID WILLIAMS, of Liverpool, has inserted in the Edinburgh Journal some reasonings tending to show that the sounds described by LAENNEC as being produced by the contraction of the auricles, are in reality owing to a different cause. A point so essential to a correct application of the principles of mediate auscultation to the above named organ, ought certainly to be investigated with the utmost care. When the stethoscope is applied over the region of the heart, and the operator listens at the other end, he hears first a dull prolonged sound, followed by one more sharp and quick, and subsequently by an interval of repose. The first of these sounds is considered by LAENNEC as that of the contraction of the ventricle, and the second as that of the auricle, whose slighter parietes produce this sharper report. Dr WILLIAMS considers this sound as being produced by the sudden contraction of the columnæ carneæ forcing the tricuspid and mitral valve suddenly forwards and against the sides of the auriculo-ventricular passage, after the termination of the contraction of the ventricles. The systole of these cavities, while it opens the semilunar valves, closes the mitral and tricuspid; and thus puts the columnæ carneæ on the stretch. These contract, and, the moment the systole ceases, pull the appended valves suddenly forward against the sides of the ventricles, emitting the sound in question, and draw a certain portion of blood into the ventricle. The real sound of the contraction of the auricle is "blended with [that of] the systole of the ventricles;" while that of the latter is principally occasioned by the passage of the blood into the arteries.

In confirmation of this opinion, Dr WILLIAMS offers a chain of reasonings difficult to condense, and quotes the older physiologists. He neither gives cases nor vivisections; with the exception of a notice of two dissections in cases which afforded the "bellows-blast" sound, but which do not bear upon the main object of his essay. It may be even doubted whether he has thoroughly studied LAENNEC; as he quotes him, as well as HARVEY, from an essay in the Transactions of the Medical Society of Edinburgh, by Mr TURNER. We have only to say, in addition, that he has not convinced us; and that it appears to us far more probable that the shorter and sharper sound is produced by the contraction of the auricle, operating amid the adjacent air cells of the lungs, than by the collision of the valves against the inside of the heart. We consider the locality of the sound as evidence of this; as well as the fact that the diminution of thickness in the walls of the ventricle itself, by hypertrophy, causes the sound of the latter cavity to approach so nearly to that of the former as to be distinguished with difficulty. (Vide LAENNEC). In the last summer we had

charge of a case in which the short, clapping sound alluded to was singularly loud. By the subsequent occurrence of pectoriloquy, and the gurgling rattle, the existence of a tubercular cavity was made apparent, while the auricular sound was reduced to its natural standard; and it was hence evident that the sound alluded to reached the ear in a louder key from traversing a mass of solid matter. Now the situation of this (under the second rib, near its cartilage, in the right side) was such as to correspond with that of the right auricle, and not of the tricuspid valve. We do not cite this case as attaching to it any particular importance: the work of the illustrious deceased contains, as we apprehend, evidence abundantly sufficient.

14. *Dropsy from Diseased Kidneys.*—In 1827, Dr BRIGHT, of Guy's Hospital, in his Reports of Medical Cases, made known the dependence of occasional instances of dropsy upon a peculiar organic disease of the kidneys; and in the October number of the Edinburgh Journal are inserted some comments, with the details of seven additional cases, by Dr CHRISTISON of Edinburgh. The latter physician conceives the cases under question to be one of the most common forms of dropsy; and states that no less than twenty occurred in the Royal Infirmary within a year, and five were under treatment at the moment of writing his essay.

The fundamental change of the urinary secretion in this variety of dropsy is a diminution in the proportion and quantity of urea. In every case examined by Dr CHRISTISON there was a material diminution; the quantity contained being seldom so much as half the usual proportion, and occasionally not above a fifth. The salts of the urine are invariably diminished in quantity as well as the urea, and commonly in the same proportion. The insoluble earthy salts have appeared always very scanty, and sometimes almost altogether wanting. According to Dr BRIGHT, when the urine in dropsy is *coagulable by heat*, this will be invariably found to indicate organic disease in the kidneys. In all Dr CHRISTISON's cases, this phenomenon was discovered. In four of them out of seven, other organs were found affected, sometimes by very violent inflammation. It was not found that the discharge of albumen through the kidneys, which gave rise to this coagulable property, was vicarious to that of urea; as in three cases the secretion of urea and that of albumen were, at the same time, both small; while in two others, both were in considerable quantity. In two cases, the secretion of albumen was nearly or entirely prevented by treatment; while that of urea still continued. Still Dr CHRISTISON thinks it appears probable that the effusion of albumen into the urinary passages, as well as into the serous cavities and cellular tissue of the body, is owing to the retention of the urea and urinary salts in the blood. Dr BOSTOCK had attempted to ascertain the presence of this substance in the blood by chemical means, in several of Dr BRIGHT's patients; but could only detect "a matter possessing peculiar qualities, which seemed to approach to those of urea." In two cases, Dr CHRISTISON has succeeded in developing this substance, as he thinks, indisputably. In a third, crystals were produced resembling those of nitrate of urea in every respect except their form of crystallization. The preceding results, as Dr CHRISTISON observes, confirm the conclusion drawn by MM. PREVOST and DUMAS from their experiments on living animals, viz. that urea is not formed by the kidneys, but only eliminated by them, having previously existed in the blood in its natural chemical state. In three other cases Dr CHRISTISON failed in obtaining the same results. A slight milkiness of the serum, amounting to opalescence, is not an uncommon appearance in these cases. This he considers to be owing to a small quantity of oil; a point in which he disagrees with Dr BOSTOCK. Dr CHRISTISON found the serum of the blood diminished in specific gravity, apparently by the loss of its albumen, and the quantity of solid matter contained in it considerably diminished. The serum of a healthy individual, a girl, was of the specific gravity 1030.8; that of three of the above cases, respectively, 1024.8, 1022.5 and 1020.

The treatment appears to have depended, in a great measure, on bloodletting.

Various diuretics were tried. Digitalis appeared to answer well in many instances; in others it appeared to act dangerously as a narcotic. Supertartrate of potass appeared one of the most certain of the diuretics resorted to. Mercury was employed to aid the operation of diuretics, with what result does not appear; but it is stated not to have been more unmanageable than in other diseases. Dr CHRISTISON has ascertained that the quantity of urea and earthy salts contained in the urine was increased by the diuretics in proportion to the whole amount of fluid.

Dr CHRISTISON is convinced of the possibility of a radical cure; except in those instances in which a large part of the substance of the kidneys is actually destroyed. This case he thinks indicated by an excessive deficiency of urea in the urine, whether it be highly albuminous or not. Yet even in this instance, very marked amendment has been obtained.

Dr BRIGHT, in London, found a strong tendency to inflammations in the great cavities of the body. Dr CHRISTISON did not find this so remarkable among his Edinburgh subjects; particularly in the lungs. On the other hand, in a majority of cases, an alarming or even fatal disease of the head supervened, during the later periods of the disease.

In the dissections there were found traces of severe disease, generally, in fact we believe entirely, of a distinct inflammatory character, in the brain and membranes, peritoneum, lungs, heart, aorta, pleura, spleen and intestines. The mucous coat of the latter, or of the stomach, is not particularly spoken of, and probably was not examined. The kidneys were found as follows: Case 1. Unusually small, hard, pale and scabrous. Cortical part pale and granulated,—a great part of the tubular portion disorganized by a deposition of greyish yellow matter, and did not retain its fibrous structure. 2. Right kidney rather less than natural, externally rough, with small irregular nodules, and of a pale greyish-brown colour, internally of a pale greyish-yellow tint. Tubuli unusually near the surface, greatly diminished in size, and pushed outwards, as it were, by a deposit around the pelvis of a greyish-yellow, indistinctly granular matter, into which also the whole cortical substance was converted, so as to have lost its usual fibrous appearance. Even the fibres of the tubuli were unusually pale, and yellow matter was deposited among them. Pelvis of kidney small; ureter pervious. Left kidney very much diminished, flattened and flabby. Cortical substance similar to the right kidney, but rather darker, with a few distinct tubercles, and some grains softened. Tubular portion dark brownish red, and not fibrous; contained several small watery cells, apparently the remains of the infundibula. Ureter pervious. Capsular fat of both kidneys indurated. Tunica propria thickened and adhering. Case 6. Right kidney converted into a large cyst, having a thin crust of bony substance, intersected internally by several partitions of the same nature. Its contents consisted of a turbid, serous fluid, with a large quantity of silvery flakes floating in it, which were chemically demonstrated to be pure cholesterine. Right renal artery nearly obliterated. Soft kidney much enlarged; its internal structure softer and whiter than natural. Infundibula here and there lined with specks of cholesterine. Ureter larger than natural. 7. Kidneys of a lighter colour and more dense in their substance than natural. Cortical substance most changed.

15. *Mortality of Children from Cold.*—Our readers will recollect the account in our fifth volume of the work of Dr W. F. EDWARDS, in which he treats of the deleterious effect of cold on animal life, and of the incapacity of young animals, in particular, to sustain it. We find in the Journal of Health, No. 3, the following statement of the observations of Drs MILNE EDWARDS and VILLERME.

"1. That, in children, from birth to the age of three months, the greatest mortality is during the cold season. The reverse obtains from one to fifty years of age.

"2. The mortality is greater among the children born in northern than in those born in southern climates.

"3. To the north, the deaths of children are more numerous during winter than in any other period, allowances being made for particular causes." This exception embraces epidemics, and such instances as the mortality among children from excessive heat in Philadelphia, during the summer months.

The following account is also given of some of the results obtained by Dr TREVISANO, of Castel Franco, in Italy.

1. Of one hundred infants born during the three winter months, sixty-six die in the first month, and fifteen more in the course of the year; so that only nineteen survive this period.
2. Of one hundred born in spring, forty-eight live beyond the first year.
3. Of one hundred born in autumn, fifty-nine survive the first year.
4. Of one hundred born in summer, eighty-three survive the first year.

Dr TREVISANO ascribes the mortality of infants to the practice of exposing them to very cold air a few days after their birth, in taking them to church, for the purpose of being christened. Drs EDWARDS and VILLERME unite in the same opinion.

16. *Case of Congestion of the Cerebellum, with involuntary walking backwards.*—This curious case illustrates the interesting discussion relative to the functions of the cerebellum and the adjacent parts. It is taken from MAGENDIE's Journal de Physiologie, for April, 1829; to which it is contributed by Dr NICHOLAS HANET.

The chevalier D. a widower, about fifty-six years of age, of a sanguine temperament and a good constitution, was cured of a *pleuro-bronchitis*. Two months afterwards, on the 9th of November, he was attacked with a *pharyngitis;* which was combated by an application of twenty leeches to the upper and lateral parts of the neck, by emollient cataplasms, mucilaginous drinks, &c. He had had nocturnal emissions for five or six nights. On the evening of the 13th, he was affected with a strong flush in the face, particularly over the cheek bones, eyes brilliant and slightly injected, pulse strong, but little increased in frequency, (peu fréquent), skin hot, sensation of distress in the occipital region, and difficulty in performing the lateral movements of the neck. In the night occurred vertigo, giddiness, and an obtuse pain in the occiput. M. D. went on his knees, to evacuate the urinary bladder, and was in *great danger of falling backwards;* which he prevented by grasping the head of his bed. Continual and fatiguing erections continued the whole night, but without emissions. Next morning the injection of the face had disappeared: but a similar appearance had taken place in the occiput and back of the neck, with a slight tumefaction, but no soreness on pressure. Pulse the same as before. M. D. experienced giddiness, but went out, and went (parcourt) a distance of about two gunshots; during which walk he was obliged to stop several times, to avoid a fall backwards, and to resist the tendency he felt to walk in that direction. He even made a step backwards, which he designed for the forward direction. When arrived at his place of destination, he again experienced giddiness, and a fresh propensity to walk backwards. *He made nine or ten steps backwards, and would have fallen on his back, if he had not supported himself upon a piece of furniture.* The same propensity continued till his return home; when the symptoms immediately gave way before a bleeding of eighteen ounces, low diet, acidulated drinks, and a foot bath with mustard. Next morning the Chevalier was quite well.

17. *Case and Preparation, exhibiting the creamy matter called "Muguet" in the small intestines.*—We believe that a distinct account of the "muguet" is not to be found in our language. At least, it has escaped the industry of Dr MASON GOOD; who, amidst a large amount of Arabic and Greek, has omitted this malady, so well described by the French pathologists. Yet we believe it to be of no very uncommon occurrence in this country; as we have seen several instances of it, with which, at first, we were greatly embarrassed. We afterwards learned the generally mortal character of the severer forms of this disease, from practitioners of experience, to whom it seemed by no means unfamiliar. As this,

therefore, is the case, we must define the disease of which we speak. When mentioned at all, it has generally been considered as a variety of aphtha. Aphtha lactamen of SAUVAGES, A. lactantium of BATEMAN. (*Guersent.*) "Aphthæ exhibit, in their first period, swelling of the mucous follicles, the appearance of a white or whitish point in their centre; then enlargement of the follicular point, exudation of the white or puriform matter which it contains, through the minute orifice, *over which* the epithelium bursts." (Vide below.) "In their second stage, a superficial ulceration with the edges rounded, or sometimes such as would be produced by cutting perpendicularly through a portion of the membrane, more or less tumefied, and almost always surrounded by a circle of a fiery red colour; cicatrization of the ulcer, seldom or never leaving any scar." "The muguet presents, in its first stage, no particular follicular development; but a simple erythematous redness of the mucous membrane, the intensity of which is uniform. In the second stage, the mucous membrane is covered with an exudation like cream, in dots, small globular masses, or broad membranes, and of a white, yellow, or greyish colour. This appears to be a concretion of a mucous rich in fibrine." M. GUYOT has never seen it beneath the epithelium. Sometimes it adheres pretty firmly to this latter membrane; while in other instances it is separated with the utmost ease.

We candidly confess that we do not understand the mechanism described above, by which the puruloid fluid is secreted in a mucous gland or follicle, and subsequently gets under the epithelium, at all, either by a rupture or otherwise. Nor do we find, in two or three references which we have made, the means of rendering it any more intelligible. Still it appears that the vesicular form is assumed; and the small projection thus produced, is subsequently flattened by the subsidence of the pus into a little ulceration gradually formed beneath. This, with the comparison given above, is the shortest and most efficient mode we are able to employ to give a clear idea of the muguet.

The muguet, when very mild, appears to be capable of cure by demulcent applications and drinks. In the decline of the disease, some preparation containing a little oxymuriatic acid may be added. Thus one part of LABARRAQUE's disinfecting liquid may be added to three parts of mucilage. In the opinion of M. GUERSENT, no syrup, honey of roses, lime water, borax, or white vitriol should be added; as all these substances augment irritation, either in the mouth, or some other part of the alimentary canal.

When severe, the muguet is almost always complicated with active inflammation of some internal organ; and these cases are almost always mortal. In several of the instances in which we have seen it, the disease we speak of came on at a more or less advanced period of a malady already existing; and we viewed it as a fatal symptom. In one instance, when this affection was the first observed, an experienced physician whom we called in consultation, assured us that he had never seen such an appearance, without good reason to believe in the contemporary existence of some internal suppuration.

M. GUERSENT believes that in those parts where the epithelium is distinctly visible, as in the mouth, the matter of muguet is deposited beneath that membrane. He finds it adhering as far internally as the œsophagus, but rarely in the stomach. M. VERON and some others, believe that all the matter of this kind found in the stomach is loose, and has been conveyed thither by deglutition. "It has never," say ordinary writers, "been found in the small intestines," and very rarely about the ileo-cœcal valve, and in the large intestine.

We have thought it proper to deviate from our usual abstract, in order to present thus much of a general account of a fatal, undescribed, and not uncommon disease. We now return to the case before us.

M. GUYOT, whom we have mentioned above, has presented it, with the anatomical preparation of the part, to the Anatomical Society of Paris. He mentions the above general denial, and adds, that M. BARON has seen two cases of the kind, and on examination of the present case, found it similar to the others. Theodore Lepage, aged twelve days, was left at the Enfans Trouvés. He was feeble, emaciated, and affected with an œdematous swelling of the cellular tissue

of the abdominal members and of the region of the pubis. His cry was feeble but distinct. The stethoscope and percussion indicated his thoracic organs sound. His tongue at the edges was red, and had the papillæ very strongly developed; it was moist and healthy over the rest of its surface; abdomen soft, a diarrhœa abundant, very liquid, yellowish and serous. Redness around the arms. Heat of the skin natural. Pulse eighty. Rice [water] with gum; cataplasms on the abdomen; dry frictions to the lower extremities. Until the 20th of June, (six days), there was no remarkable change, except that the œdema diminished a little, and the alvine discharges were less liquid. June 20th. Vomiting of the drinks, tongue red and dry, thirst acute, belly hard and tympanitic; pressure on the belly gives rise to a faint cry and wrinkles of the forehead, heat of skin intense, pulse ninety-five. Rice (as above) with gum; enema of starch, warm bath. June 21st. Prostration, extreme paleness, vomiting of the drinks, diarrhœa continued, extremities cold, pulse very frequent and almost insensible. June 22d. Died in the morning without convulsions, and after a short struggle.

Dissection, June 23d. Head and thorax natural, as were also the liver, spleen and kidneys; mucous membrane of the cheeks rosy red, a little paler in the pharynx and œsophagus, but of the ordinary firmness; stomach slightly distended with gas, and lined with a coat of frothy mucus. Two oblong red patches at the larger end, with the mucous membrane softened. The rest of the stomach nothing remarkable. Jejunum—a "capilliform" injection of the mucous membrane. Upper portion of the ilium, coloured yellow; beneath this coating, of a uniform rose colour. A little further down were perceived, here and there, at first along the convex edge of the intestine, small patches of a soft exudation, yellowish in colour and slightly adherent to the mucous membrane. The surface of these patches was uneven, resembling shagreen. In the last six inches of the ilium, this exudation covered the mucous membrane throughout all its extent, so as completely to conceal it. The matter of exudation here and there, throughout the portion of intestine just mentioned, formed slight but perceptible projections. It appeared to be formed of a multitude of little spheroidal bodies, oblong and agglomerated, and compressed against one another. The valvulæ conniventes were marked by small projecting lines, at which the exudation did not appear more abundant. The ilio-cœcal valve and the whole length of the large intestine were coated with it. In the ascending colon the projections were more distinct and pointed. In the transverse arch of the colon the exudation resembled in its form a mulberry calculus, or certain stalactitic carbonates of lime. In the rest of the intestine it was arranged in flattened oblong mammillary projections, leaving the membrane uncovered in small patches. Near the anus the membrane was nearly bare.

At all points where examined, this exudation could be separated with great ease from the mucous membrane. The latter appeared of one colour, without any trace of erosion or ulceration. The villosities and follicles were subjected, in various places, to the action of a good magnifying glass; and they did not appear more developed than in their ordinary state.

IV. THERAPEUTICS.

18. *Case of Dropsy treated by Extensive Depletion—cured.*—The following interesting case of extensive dropsy, with its treatment, is detailed in Rust's Magazine, b. 29, h. 3, 1829. A labourer, thirty-five years of age, was on the 26th December 1828 admitted into the hospital at Berlin on account of a stoppage of his urine, he being able to pass it only guttatim and with severe pain. This had occurred after he had worked several days partly immersed in water. The urine discharged was thick, opake and dark coloured; his legs soon became œdematous. The exhibition of an emulsion, with the addition of the cherry-bay water and fomentations to the region of the bladder, caused the pain to abate. On the third day after his admission symptoms of hydrothorax presented themselves, with in-

creased tumefaction of the legs and abdomen. The patient laboured under great difficulty of respiration, which rapidly increased, so that he was able to respire only in an erect posture and with great exertion. He felt, he said, as though his chest was bound with a tight band. When he lay upon his back symptoms of suffocation immediately occurred. The face was flushed and of a dark red colour; the pulse greatly oppressed. Sixteen ounces of blood were drawn from the arm with considerable diminution of all the symptoms. The patient's bowels being sluggish, an ounce of salts in solution was directed. The subsequent night the patient slept several hours tolerably well. To increase the urinary secretion, as well as to reduce arterial excitement, half a drachm of an infusion of digitalis with aqua laurocerasi and nitre was administered. The difficulty of respiration returning in the evening, eight ounces of blood were drawn off. For several days there was no increase of the thoracic symptoms. The tumefaction of the feet and abdomen was still considerable. In addition to the infus. digitalis, a powder composed of three grains of calomel and one of digitalis was directed three times a day; the affection of the chest augmenting, six ounces of blood were extracted. Eight of the powders having been taken, indications of ptyalism presented themselves; the powders were discontinued, and the dose of the infus. digitalis increased to two scruples. Eleventh day of treatment: the secretion of urine somewhat increased; the oppression at the chest being augmented in the evening, three ounces more of blood were drawn: from this the patient felt more relief than he had experienced since the commencement of his sickness. The digitalis was suspended, and in its place a combination of cream of tartar, oxymel of squills and the lenitive electuary was ordered. This occasioned from two to three stools per diem. The secretion of urine now daily augmented, and the more distressing symptoms gradually disappeared, leaving the patient in a very weak condition. He slept composedly at night, a recumbent posture no longer giving rise to difficulty of respiration. This state of improvement lasted for three days, when the patient again experienced an attack of oppression at the chest, and difficulty of respiration; these were immediately removed by the abstraction of an additional quantity of blood. The secretion of urine was now very copious; several stools occur during the day. The lenative electuary omitted. By the end of January the patient was completely free from every symptom of disease.

19. *Ergot in Intermittent Fever.*—It is stated in Rust's Magazine, Vol. XXIX. No. 3, that Dr Mehlhausen of Eilau has employed the ergot in intermittent fever, according to the recommendation of Dr Baker of Wilmington, in the state of Delaware, and he is persuaded that it is a remedy deserving the attention of physicians in that disease. In the autumn of 1828 he made his first trial with the article by prescribing it in seven uncomplicated cases, five of which were entirely cured by it, viz: three quartans, and two tertians; one of the remaining cases was removed from under his care soon after the treatment was commenced; in the other, a debilitated subject, sixty years of age, the ergot produced no effect, and the cure was effected by the bark. The ergot was given in doses of ten grains every two hours before the expected paroxysm. In debilitated persons only six to eight grains were given at once. Of course this remedy is totally inadmissible where there is the least suspicion of pregnancy.

20. *Case of Traumatic Tetanus successfully treated.*—In Hufeland and Osann's Journal der Practisch. Heilk. April 1829, Professor Luders, of Kiel, relates the following interesting case. A blacksmith, aged twenty-three years, of a robust constitution and phlegmatic temperament, was, February 23d, 1828, whilst in a state of intoxication, thrown from a horse. He fell flat upon his face, receiving several contusions upon his forehead and cheek, and a contused wound upon the upper lip and near the root of the nose. By the end of March these were entirely healed and the patient was able to return to his work. The cicatrices of the wound were, however, still covered with a kind of scurf, and the seat occasionally of slight pain. By the 7th of April, symptoms of trismus had made their appearance. Venesection, leeches to the abdomen and neck, and

a dose of castor oil, followed by a combination of calomel and opium, were directed by Dr HERTZ: these produced no good effect. On the 12th of April the patient was admitted into the hospital at Keil. He complained of pain of the abdominal muscles, increased upon motion; these muscles, as well as those of the back, felt tense and hard. In the neck and over the chest he experienced a painful constriction by which respiration was impeded. The jaws could be separated only four or five lines. The countenance was expressive of great anxiety, the forehead covered with sweat; the bowels had not been evacuated for several days; urinary discharge small in quantity and painful. There was considerable thirst, some appetite, no affection of the mind; pulse somewhat frequent and small. The cicatrix near the nose was red and covered with dry scurf, the surrounding parts red, swollen and somewhat tender to the touch; no foreign substance to be detected under the skin, nor any appearance of injury of the bone. The patient was placed in a bath of ley of twenty-six degrees Reaumur, on attempting to lie down in which, convulsive contractions of the muscles of the trunk and extremities were excited: the bath produced general perspiration. In thirty minutes a glyster of vinegar was administered, which was followed by several evacuations from the bowels: half a grain of opium, two of calomel and four of volatile alkali, in combination, were then directed, to be repeated before night. April 13th. During the night the patient was quiet but sleepless, symptoms the same as yesterday. Two grains of calomel and half a grain of opium were directed every two hours; sixteen leeches were applied to the cicatrix on the nose, followed immediately by a poultice with tincture of hyosciamus; morning and evening half a drachm of a mercurial ointment being rubbed in at this place; daily immersion in an alkaline bath; infusion of oatmeal or tea for drink. 14th. No sleep, pulse ninety-two and small, patient able to open his jaws somewhat wider, contraction of abdominal muscles less, two fluid stools; half a grain of calomel and opium were directed every two hours, bath repeated. 15th. No sleep, jaws completely closed, spastic state of the muscles generally; those of the back resembling a board in hardness, pulse small and frequent. In the afternoon after the bath, remission of the spasm; salivation has commenced. A spoonful of the following mixture directed every two hours: Camph. trit. gr. iij. gum. arab. mucil. ʒvi. tinc. thebiac. ʒi. M. and frictions to the under jaw, of camphorated volatile liniment ʒj. tinc. thebiac. ʒj. The mercurial applications to be discontinued. In the evening the patient took also ten grains of Dover's powder with two grains of opium. 16th. Condition of the patient somewhat improved; labouring under profuse salivation with bleeding of the gums, the latter was speedily suspended by a gargle of sage tea and alum. He was directed: Opii ℈j. vol. alk. ʒijss. sacc. alb. ʒvi. M. f. Pulv. 40. One to be taken every two hours. Under the use of this prescription he continued until the 18th without any decided alteration in the symptoms of his disease, with the exception of the occurrence of diarrhœa. Every day he was immersed in a bath of ley, followed by frictions to the abdomen, of half a drachm of laudanum. His drink consisted of beer, in which the yolk of an egg had been been beaten up. On the 18th there was much pain of the mouth, with extensive aphthous ulcerations; these were pencilled with a mixture of nitric acid, honey of roses and tincture of myrrh. 19th. General tetanus, with great oppression at the chest, and severe pain of the back; increased upon every attempt to move. While in the bath, the patient was attacked with opisthotonos. He was directed: Opii ʒss. sal. volat. ℈ii. sacc. alb. ʒi M. f. Pulv. x. One to be taken every two hours. Ten leeches were applied upon the cicatrix on the forehead, which appeared somewhat reddened, and a poultice of hyosciamus to the abdomen. 20th. Patient had a short sleep during the night; his body covered with a general perspiration, followed towards morning by a diminution of all the symptoms. Having had no opening for two days, a drop of croton oil was administered. 21st. Four hours sleep during the night; general spasm less; inclination to pass urine without the ability, accompanied with pain in the region of the bladder. In the bath, ineffectual attempts were made to pass the catheter. Bowels have not yet been opened. An injection was administered of honey, sulphate of magnesia and train oil, which produced copious stools and a discharge of urine, followed by a considerable diminution of all the symptoms.

Continue medicine as before. 22d. Slept during the night; can go to the night chair without assistance; complains of pain in the back and neck, and of a soreness of the mouth; an eruption has appeared upon the skin, produced no doubt by the bath. Poultice to abdomen, and frictions continued. In the course of the day all the symptoms of a congestion of the brain made their appearance; no delirium while awake, but disagreeable dreams and talking during sleep; bowels constipated. This congestion was considered to be produced by the opium. 23d. One grain of nux vomica was directed three times a day. The administration of two drops of croton oil and a spoonful of castor oil produced two full evacuations. Salivation continues. Cold was applied to the head, which caused a feeling of great anxiety, but rendered the brain more free. 24th and 25th. No alteration; medicine continued. 26th. Convulsive motions of the extremities; the nux vomica being discontinued, they ceased. 27th and 29th. Patient daily improves, the nux vomica had been again commenced with. 30th. After an accidental exposure to cold, the tetanic symptoms returned to nearly the same extent as before. Two grains of opium were at first administered every two hours, and subsequently three grains, with six of vol. alk. Daily an alkaline bath, poultice of hyosciamus to abdomen, and frictions with the camphorated volatile liniment to the spine and under the chin. On the 5th of May the doses of opium were increased to four grains. By the 8th of the month he had taken sixty grains of opium without the least amendment in the symptoms. The bowels were directed to be kept open by croton oil and glysters, and the patient to take three times a day the following powder. Pulv. rad. belladon. gr. j. pulv. rhei. gr. vj. M. with frictions to the cheeks, of mercurial ointment and laudanum. The disease continued unabated to the 10th of May, when, however, a remarkable diminution of all the symptoms took place, and by the 20th the patient was completely convalescent. He has remained to the present period entirely free from disease.

21. *Tetanus cured by the Acetate of Morphia, applied externally.*—Omodei's Annals for May 1829, contains the details of a case of tetanus, in which Dr G. Cerioli of Cremone, resorted with the fullest success to the acetate of morphia applied to the denuded skin. It does not appear that the disease was completely developed, as the abdominal muscles are only said to have been spasmodically contracted, and those of the extremities and body only momentarily so. Trismus was complete, as it was with the utmost difficulty that the mouth could be opened. After using without success a variety of means, as blisters to the wound, cataplasms, opiate and camphor liniments, acetate of morphia administered internally, bloodletting, leeches, sudorifics, &c. Dr Cerioli directed a blister to be applied to the back of the neck, and a quarter of a grain of the acetate of morphia to be sprinkled on the denuded skin. The application was commenced on the first of November, about ten days after the appearance of the tetanic symptoms. On the 10th of November the patient was so much better, that the remedy (the dose of which had been increased a few days before) was discontinued. On the 16th the patient was discharged cured.

While on the subject of tetanus we must mention that at a meeting of the Royal Academy of Medicine, Mr Lisfranc presented a man whom he had cured of the traumatic form of the disease. In this case emprosthotonos was completely formed, and in a few days tetanus became general. The treatment, which lasted nineteen days, consisted in the following means: 1. Eight copious venesections. 2. Seven hundred and ninety-two leeches (equivalent to upwards of two thousand of our own) applied along the spine, with the exception of fifty, which were directed to the epigastrium, with a view of removing gastric irritation manifested at one period of the disease. 3. Several full baths. 4. Laudanum injections, twice a day.

On the twenty-fourth day after the appearance of the disease, the patient was pronounced cured, and a few days after took a walk in the court of the hospital. Notwithstanding the copious abstraction of blood to which the patient was subjected, the pulse retained its strength, and no signs of debility were noticed. We are indebted for this article to the Journal des Progrés, No. 16.

22. *Sulphate of Copper as a Remedy in Croup.*—In Hufeland and Osann's Journal for May 1829, Dr FIELITZ relates five cases of croup, in order to prove the efficacy of sulphate of copper as a remedy in that disease. We annex a detail of two of these cases, and regret that the want of space forces us to omit the others.

Emily S———, three years old, of a weakly constitution and inclined to scrofula, had lost an elder sister five days before by the croup, and was attacked January 23, 1824 with fever, a short hoarse cough, indistinct articulation and laborious respiration, with some degree of rattling in the chest. An emetic was directed and followed in the evening by four grains of calomel. A considerable quantity of viscid slime was discharged by vomiting. In the evening all the symptoms augmented, the cough assuming more and more the croupy sound. By the emetic the bowels had been once opened. Four leeches were now applied upon the neck, and a blister over the upper part of the sternum; every two hours a quarter of a grain of sulphate of copper in sugar being administered. By the first doses vomiting was in a few minutes produced, by which a quantity of viscid mucus was discharged. After midnight the child became more composed, the skin was covered for several hours with moisture, and towards morning a tolerably quiet sleep ensued. The next morning all the symptoms were found to be greatly abated. An eighth of a grain of digitalis was added to each dose of the sulphate of copper, and for drink lukewarm sugared water. During the day the cough and respiration lost entirely the croupy sound, and several hours of sleep were obtained at night, interrupted however by occasional attacks of a loose cough. By the third day the patient became sprightly, cheerful, and very shortly entirely free from all disease.

Case 2.—Julius R———, three years old, stout and healthy, was on the 28th of February 1824, suddenly taken ill with a severe hollow cough, indistinct articulation, very difficult respiration attended by symptoms of suffocation. The slightest pressure upon the larynx caused the patient to scream aloud. The face was dark red and tumid, the eyes glassy, mouth and tongue parched, the whole body hot and dry, pulse quick, hard and contracted, violent pulsation of the arteries of the neck; urine passed involuntarily. Five leeches were directed to the throat, the bleeding from which to be kept up for three hours, followed by a blister on the upper part of the sternum, and every two hours a quarter of a grain of sulphate of copper in sugar. Next day patient better, had passed a tolerable night. The first doses of the sulph. cupri had occasioned repeated vomiting. Cough and hoarseness still continue. At noon the patient was covered with a profuse sweat; had slept; cough and respiration more free. In the evening exacerbation of fever with increase of the other symptoms; an eighth of a grain of digitalis was added to each dose of the sulph. cupri. March 1st. During the whole night patient in a profuse perspiration, the cough has lost its croupy sound, other symptoms abated. An emetic of twelve grains of sulph. cupri had produced a discharge of a quantity of very consistent mucus. The powders to be discontinued until evening, and a mixture of the muriate of ammonia given. By the 4th all the symptoms of the disease had disappeared. On the 12th, the child having ventured out too soon, the disease returned, but with less violence. Two grains of sulph. cupri were administered, and produced frequent vomiting of a thick mucus. Minute doses of the sulphate of copper and digitalis were then commenced with, by which, and light diaphoretics, in a week the patient was entirely cured.

23. *Power of Sulphate of Quinine in accelerating Mercurial Action.*—Dr HARTY of Dublin has inserted in the Edinburgh Medical and Surgical Journal for October 1829, a letter, in which he offers a few remarks on the power of sulphate of quinine in accelerating mercurial action. The first cases in which he perceived this effect occurred among the female convicts in Richmond Bridewell. The disease was ague. He administered to the patients the sulphate of quinine, "directing at the same time the occasional use of the "*house pill*" consisting of calomel and scammony. Though I had seen sudden ptyalism ex-

cited by a few doses of these pills in a few of the female prisoners, I was yet much surprised at the rapidity and severity with which, on this occasion, almost all those were so assailed who were taking the quinine." Dr HARTY witnessed the same effect in the male prisoners of Newgate. In some of these he found that the quinine re-excited the mercurial action after it had apparently ceased. He details the two following cases in exemplification of these facts. *Case* 1. "A boy four or five years of age, previously very healthy, was seized with severe tertian. The tongue being foul and the belly full, directed three grains of calomel, which purged him well and relieved him much. I then administered the quinine in solution, and in about six days I repeated the calomel with similar good effect, still continuing the quinine. The ague speedily ceased, but at the expense of the worst ptyalism with ulcerated and everted gums I had seen for a long time. He did not entirely recover from its effects at the end of six weeks." *Case* 2. "A medical friend to whom I had communicated these facts, having been seized with quotidian, employed the bark liberally, and then the sulphate, without any previous use of mercury, which he dreaded from the readiness with which it usually affected his gums. The quotidian accessions continuing, though with abated violence, and the feces appearing of a highly bilious character, he was induced to take five grains of Plummer's pill (containing one of calomel) with the intention of repeating it daily. In less than six hours after the first dose, he distinctly felt the mercurial action establishing itself in the gums, and could scarcely credit his feelings until the facts already detailed were recalled to his recollection."

24. *Power of the Chlorides in preventing the Propagation of Plague.*—The Journal Des Débates for the 7th October last contains some interesting extracts from letters addressed to Paris by M. D'ARSET, Jun. from Tripoli, in which this young and already distinguished chemist, who forms part of the French medical commission sent under the direction of M. PARISET to study the character, mode of origin and of propagation of the plague in Egypt, and try the effects on it of the chlorides, gives an account of the power of these articles in preventing the extension, and guarding against the contagion of plague. The commissioners, after washing the clothes of persons who had died of the disease, and which were covered with marks of blood, pus, &c. in a solution of chloride of sodium, put them on next to their bare bodies, kept them thus nineteen hours, without experiencing the least unpleasant result from this experiment. They have dissected several bodies of persons who had died of the plague, without experiencing any ill effects. During the operation they kept their hands constantly wet with the same solution.

In one of these letters, dated Tripoli, June 23, 1829, M. D'ARSET says "The plague still continues to prevail; but its habitual term approaches. In about twenty days it will disappear completely, and we will then start for Jerusalem and the neighbourhood of the Libanus, where there is some leprosy. The chlorides that have so well succeeded in disinfecting articles of clothing, has not produced wonders in the treatment of plague. Forty-seven patients to whom the chloride of sodium was administered, have not found themselves any better for it. We cannot say that it does injury, but as for benefit, that is not very positive.

25. *Intestinal Obstruction successfully treated by Mechanical Means.*—In the October number of the Edinburgh Medical and Surgical Journal, we find an account by Dr ALEXANDER R. DUGUID, of a case of obstructed bowels, in which mechanical means were had recourse to with complete success. The patient was a young man twenty years of age. He had been labouring two days under the disease, and had taken two ounces of castor oil, and a domestic enema, when the doctor was called in. "But the greater part of the oil had been vomited, and neither of these expedients (nor the warm bath) produced the smallest discharge from the bowels, or any mitigation of his sufferings." Dr DUGUID bled him largely; administered a large dose of laudanum. This put a

stop to the pain and vomiting which the patient experienced. Purgatives and injections were next resorted to, but without the slightest effect. Pain returning and no laudanum being at hand, dilatation of the rectum with warm water, thrown up by Weiss's powerful syringe, was next employed. "As soon as about a pint and a half were thrown up, he complained of much pain and distension, and it was returned with great force in spite of my efforts to prevent it, and without any trace of feculent matter. This was frequently repeated with the same result. I then introduced the elastic tube of Weiss's instrument, well oiled, about ten inches into the rectum, and finding an obstruction to its further passage, I fitted the syringe to its extremity and continued to exhaust the air for a minute or two; but this having no effect, I attempted to push the tube past the obstruction. After some difficulty, and repeated trials, I gained a few inches, when all at once, to my great satisfaction, the resistance was overcome, and a copious discharge of very fetid flatus, with some liquid feces, took place through the tube, with almost instant relief of the distension and pain of the belly. I then fitted the syringe to the extremity of the tube, and pumped out a large quantity of feculent matter of the appearance and consistence of yeast. When this was too solid to pass through the tube and syringe, so as to choke the instrument, a quantity of warm water was thrown in. and the pumping process resumed. In this way a great accumulation of feces was brought away, with total relief of all the symptoms. Upon withdrawing the tube, the cause of the obstruction, which indeed I had previously surmised, became very apparent, by the thin streaks of hardened feces with which the tube was coated on various parts of its surface, and which were confined to that portion of it which had passed the region, about ten inches from the anus, where the great difficulty of introduction had been experienced. An opiate enema was now administered, and I left my patient." "A purgative mixture of senna and salts was sent him, which operated well and left him convalescent."

26. *Treatment of Phthisis Pulmonalis by Chlorine.*—At a meeting of the Royal Academy of Medicine of Paris, (Section of Medicine,) 11th of August 1829, M. Desportes reported on a case of phthisis cured by means of inhalations of gaseous chlorine, by Dr Cottereau, *aggrégé* of the faculty of medicine of Paris. The subject is a young medical student, of delicate health, and in whom all the symptoms of the tubercular affections of the lungs were observed in a very high degree. The patient was in a frightful state of debility and emaciation, and the disease appeared to be beyond all hopes of cure, when Dr Cottereau, by means of an instrument of his invention, administered the chlorine gas. The influence of this treatment was rapid, and the young man recovered perfectly. At the time the case was drawn up, *four months* had elapsed since the cure, and the subject of the case continued well, although he had applied himself to hard study, and had made botanical excursions of seven to eight leagues in one day.

The reporter is of opinion that the chlorine exerted a beneficial influence on M. Cottereau's patient, and affirms, that he has derived similar effects from this agent. He regrets, however, that the author has not entered into greater details relatively to the action of the chlorine. He adds that he has noticed the following symptoms after the administration of the remedy: irritations of the mucous membrane of the pharynx and bronchiæ, propagated to the lungs, copious expectoration, dry and fatiguing cough, redness of the cheeks, hot skin and frequent pulse. The vapours of chlorine can produce suffocation; but with care it is easy to guard against all accidents. The reporter concludes by proposing, 1. That the Academy address thanks to Dr Cottereau. 2. That the latter be requested to continue his trials with remedy, and particularly to make experiments on animals in a state of health and disease, in order to ascertain the effects of chlorine. 3. That he be requested to communicate to the Academy the results, whether favourable or not, of his observations.

M. Honore stated the case of a young woman, affected with phthisis pulmonalis, whom he treated, last winter, by means of chlorine gas. He obtained no success. M. Coutanceau announced that the chemist Gannal made a num-

ber of experiments of the kind at the Val-de-Grace, but without the least success. MM. MOREAU and MERAT cited instances in which chlorine administered in too great quantity occasioned injury to the patients. Finally, M. RULLIER remarked that he had resorted to this remedy in his hospital; but hitherto without advantage. Notwithstanding this unanimous opposition to the beneficial effects of chlorine, the Academy decided that thanks should be addressed to Dr COTTEREAU.

27. *Mode of preventing Delirium Tremens in the House of Correction of Boston.*—We extract the following remarks on the mode of preventing delirium tremens from the fourth annual Report of the Board of Managers of the Prison Discipline Society of Boston. "Like other similar institutions, it (the house of correction in Boston) is a place to which intemperance consigns its thousand victims. But in other institutions, it has been customary to a great extent, in former years, to break them off from their bad habits by degrees, and not suddenly, lest it should produce delirium tremens and death. Not so in the house of correction in Boston; they are broken off at once, in all cases, and the danger which has been apprehended, is guarded against with a strong decoction of wormwood. This is prepared in the form of tea, and given freely. With perhaps one exception, there have been no fatal consequences from delirium tremens since this practice was introduced in the house of correction in Boston. This is true, notwithstanding the fact that many of the worst cases of drunkenness in the city are subject to this treatment, and the disease often assumes a very threatening aspect. But the strong, warm, wormwood tea, in sufficient quantities, with scarcely an exception, affords relief."

There is a certain ambiguity in the last part of this extract, which makes us uncertain whether the wormwood is given sometimes during the attack of the delirium tremens, or only to prevent its occurrence. We presume, however, that the latter is the correct meaning.

28. *Treatment of Gonorrhœal Ophthalmia.*—The *Clinique*, for August 22d 1829, contains an account of the mode of treatment employed by Dr EDWARD EISSEN against gonorrhœal ophthalmia. Not having that journal before us at this moment, we make use of an extract from the article in question, published in the September number of the *Archives Generales*. Dr DUPUYTREN, it must be premised, treats this kind of ophthalmia by venesection, leeches to the inferior palpebra, and next by insufflations of calomel, and the application of laudanum to the eye. Dr EISSEN regards the second part of Dr DUPUYTREN's treatment as perturbative and dangerous, and attributes to it the ulceration of the cornea and the coagulation of the humours situated between the laminæ of this membrane. The method employed by BEER, RUST, ASTLEY COOPER AND HESSERT, appears to him far preferable. It consists in combating the inflammation by energetic antiphlogistic means. Bleeding is to be pushed very far, but leeches to the lid must be avoided, on account of the irritation produced by the bite of the animal. Cups to the temples may be advantageously substituted. As soon as the first indication is fulfilled, a revulsive action is to be obtained by blisters to the arms or back of the neck, and particularly by the use of calomel given in large doses, and in combination with some active purgative, so as to guard against a salivation. To obtain a full effect from this revulsion on the alimentary canal, it is necessary to continue it until it produces an artificial disease, against which the organic reaction is necessarily called, which alone can occasion a sufficient reaction. This artificial affection is announced by borborygmæ, by green and fetid stools, by a pallid countenance, pinching of the alæ nasi, coldness of the extremities, and a metallic taste in the mouth, which the patient complains that he experiences." The only local application to be employed consists in tepid mucilaginous decoction. Dr EISSEN adds that astringent collyria are only admissible when the inflammation has completely disappeared and it is simply necessary to produce the contraction of the distended vessels of the conjunctiva.

After noticing this proscription of opiate stimulants and astringents in the go-

norrheal form of conjunctivitis, our readers will be amused by glancing over the following article, in which will be found recommended for another form of the same disease, a widely different plan of treatment. We derive from these two articles one of two lessons: either the two forms of ophthalmia are so dissimilar in nature as to require an opposite treatment, or the same form of disease may get well under very dissimilar remedies.

29. *Treatment of Opthalmia Neonatorum.*—Dr WISHART, surgeon to the king in Scotland, has published in the October number of the Edinburgh Medical and Surgical Journal, some observations on the purulent ophthalmia of infants. We shall here present a few words on the mode of treatment he recommends, premising, however, that he considers the disease as in almost every case connected with a leucorrhœal discharge in the mother. The author remarks that the following points of practice are to be attended to. "To remove if possible the leucorrhœa in the mother previous to delivery, and if this cannot be effected, to remove artificially as much of the discharge as possible from the vagina at the time of delivery, and to pay particular attention to the eyes of the child, by washing them carefully immediately after it is born." The purulent opthalmia he thinks has a fixed course which cannot be interrupted without injury to the patient. If the patient comes under his care in one or two days from its commencement, he immediately washes away the puriform matter which glues down the eyelids with a little water, and then with a small conical pointed ivory syringe injects the following eye water, at first diluted with a little warm water.

R. Sulph. Zinci. ℈i.
Aquafortis, ʒx.
Solve et adde.
Liquoris sub acetatis Plumbi. ʒss.
Tinct. camphoræ, ʒi. or ʒii.
Misce et cola.

This is repeated three times a day in ordinary cases, or every hour or two if the quantity of the discharge is very great and is rapidly collected. If the child continues to cry more than ten minutes, the solution must be diluted. The discharge must be carefully washed away as soon as it is observed by a little of the eye water, and at night a little of the ointment of the oxide of zinc is insinuated between the eyelids. "In some cases, I have seen considerable benefit from the application of a single leech to the outer angle of the eye, especially when we suspect the inflammation is extending to the eye ball." In a few days the swelling and redness of the eyelids diminish, and the ointment may be applied after using the eye water. If the lids are very turgid they must be freely scarified, and the bleeding encouraged by fomentations. When the swelling of the eyelid subsides, and the discharge acquires a watery appearance, and the child opens its eyes better, the collyrium may be changed to a weak solution of the muriate of mercury with the addition of the vinous tincture of opium. The red oxide of mercury ointment may be substituted to the other ointment, and applied three times a day. At the end of a month the use of the syringe may be discontinued, and the collyrium merely dropped in the hollow at the inner angle of the eye, whence it can be easily made to pass under the lid.

Considerable benefit will be derived from fomenting the eyelids, for ten minutes three times a day, and at night with the same collyrium. The cloths must not be allowed to become cold.

30. *Iodine in Scrofula.*—At a meeting of the Academy of Sciences of Paris, held on the 17th of August 1829, Mr DUMERIL, in his name and that of Messrs MAGENDIE and SERRES, read a report on a memoir presented to that body by Dr LUGOL, one the physicians of the hospital Saint Louis, on the use of iodine in scrofulous diseases. We have only room to state, that from the 10th of August 1827 to the 31st of December 1828, Dr LUGOL submitted one hundred and nine patients affected with the various forms of scrofula to the use of iodine. On the last date mentioned of the whole number, thirty-nine were still under treatment,

thirty had left the hospital much relieved, four were not in the least benefitted by the remedy, and finally thirty-six had left the establishment completely cured. Among the cases treated and cured were several of a very bad kind. Dr LUGOL made use of a solution of iodine in water, in the proportion of one-half or two-thirds of a grain, or one grain in a pound of water, with the addition of twelve grains of common salt. The whole to be taken in one day. He commenced with the first, and generally prescribed the second quantity specified after using the other two months. Besides the internal use of iodine, he employed the remedy externally in the form of wash or ointment.

31. *Iodine.*—The Medico Chirurgical Review for October 1829, contains an account (abridged from the Midland Reporter), of some cases of dropsy, enlarged abdominal organs, tuberculous disease of the serous membranes, in which iodine was used with success by Dr BARON, of Gloucester, England. The first case was one of ascites succeeding peritonitis. "Powerful diuretics were given, and iodine ointment rubbed over the abdomen, but no amendment ensued. The effusion increased, and paracentesis was performed. The effusion returned, and the iodine ointment was resumed. In two months the patient was cured. The only other remedies used were leeches to the arms and a mixture of rhubarb, taraxacum and magnesia." The subject of the second case was a man "about thirty-five years of age, and an intemperate liver. He was in a state of utmost exhaustion and emaciation. His respiration was impeded, abdomen tumid, extremities livid, tongue florid, red, inappetency, frequent hemorrhages from mouth and throat, had been tapped once before he came under Dr BARON's care." After trying ineffectually remedies calculated to improve the general health of the patient, to restrain the discharge of blood and act on the kidneys, Dr BARON had the patient tapped. After this operation an enlarged and hardened liver was very perceptible both to the touch and sight. "I then recommended what had been previously adopted without benefit, I mean the use of the iodine ointment, and a mixture with sulphate of potass and extract of taraxacum, together with the nitrate of potass and infusion of rhubarb. To these remedies were afterwards added some blue pill, with squill pill and extract of conium." The abdomen filled very soon after the second tapping. "Under the remedies above mentioned, absorption began to take place, together with a manifest improvement in the nutritive process. The patient continued to improve, but he had two attacks of peritoneal inflammation, during which the swelling of the abdomen increased. He remained eight months in the infirmary. "Before he went out the ascites was completely removed, the enlargement of the liver was much reduced, and with the exception of this circumstance, and some slight œdema of the lower extremities, there was no trace of his former complaint."

Besides these, and a case of tuberculous disease of the serous membranes, and one of enlarged and indurated abdomen and impeded nutrition, in which the iodine ointment was used with decided advantage, Dr BARON relates two cases of abdominal tumours, in which the same remedy was employed advantageously. The Doctor thinks he has good reason for believing that in tuberculous diseases of the lungs in their incipient stages, iodine will prove a very useful remedy. "In most cases he used the iodine ointment combined with opium, and directed it to be rubbed upon the thorax. Other means were employed, but could not have been, he thinks, effectual without the iodine.

In the same article Dr JOHNSON remarks, "we are informed by a respectable practitioner, that he finds the tincture of iodine a most powerful expectorant in those cases where expectoration is desirable, in pneumonia, asthma, &c. This hint may be worth attending to."

32. *Opium in Rheumatism.*—The *Précis Analytique des Travaux de l'Académie Royale des Sciences, Belles Lettres et Arts*, of Rouen, for the year 1828, contains a Memoir on Rheumatism by Dr DESALLEURS, a respectable practitioner of that city. The author details the history of five cases of rheumatism treated by means of large doses of opium. They confirm the utility of the opium

practice in this disease, a practice already recommended by many preceding writers, and particularly by SCUDAMORE, CASENAVE, and by Dr BRACHET in a work, the analysis of which will be found in the present number of this Journal. In most of the cases alluded to, Dr DESALLEUR had first recourse, but without advantage, to evacuations of blood, tartar emetic, &c. Opium, on the contrary, procured sudden relief, and finally effected a cure. It is evident, however, that the treatment pursued previous to resorting to the narcotic, as it tended to remove the inflammatory condition of the system, afforded a better chance to the opium. In what relates to the administration of this remedy in rheumatism, we agree with Dr. BRACHET, who regards it likely to succeed only when the disease depends on irritation, and affirms that when accompanied with inflammation and inflammatory fever, bloodletting, leeches, &c. must precede its use.

33. *Nitrate of Silver.*—The Medico Chirurgical Review for October last contains the following letter on this medicine, from Mr CEELY, a surgeon in the country. "In two cases of very painful digestion I used the nitrate for two months, and arrived at four grain doses. One of the patients lived on gruel two months, and subsequently a small portion of fat bacon for three more; and her perseverance has gained for her that health and comfort which she had not enjoyed for five years before. In numerous other cases, I have derived infinite advantage from this sedative, conjoined with the plan of diet you have so ably advocated. I have never uninterruptedly continued the use of the nitrate beyond two months, nor have I ever seen any of its ill effects on the skin. I have found this article of great use, made into a pill with extract of poppy or hemlock, or any thing similar, and introduced up the rectum in the quantity of from one to three grains, twice or thrice a day, in that simple tenesmus supervening on active or protracted diarrhœa. Its effects are more decisive and more permanent than the direct sedatives usually employed."

34. *Arsenic in Diseases of the Bones.*—Dr I. HENDERSON, president of the Huntingdon County Medical Society, has published in the November number of the American Journal of the Medical Sciences, the history of a case of disease of the bones, in which the internal exhibition of arsenic was successfully resorted to. The patient was a girl seventeen years of age. The disease had been first noticed about eighteen months before, "when two tumours were observed, of the size of a nutmeg, about the middle of the radius of the left arm." These ulcerated, and from them nine spiculæ of bone were thrown off at different times. Other tumours were forming in other parts. Mercury had been pushed to salivation, with no other result however than arresting the progress of the disease during the continuance of its action. The patient had been so debilitated by it that it was discontinued. When Dr HENDERSON saw the girl "she was then labouring under extreme debility; countenance very palid; dyspnœa and palpitation of the heart to a distressing degree upon the slightest exertion; constant irritative fever with night sweats; the catamenial discharge had never appeared. Her father and mother's family had been remarkably healthy; no scrofulous or other hereditary disease had ever appeared in either of them, as far as could be ascertained. Osseous tumefactions of an oval form, about the size of a small plum, had been formed around the second phalanges of two of the fingers and thumb of the left hand, as well as on three of the right. The fingers appeared as if they had been inserted through the tumours (which were of a pale white colour) retaining their usual size immediately above and below them. The toes and metatarsal bones of each foot were similarly affected, and there were deep ulcerations of the ossa calcis and ankle joints, one os mala, one of the spinous processes of a dorsal vertebra, and one os femur and tibia also partook of the disease, and from all that were ulcerated there exuded a very fetid sanies, containing occasionally small pieces of bone."

Dr HENDERSON immediately resorted to a saturated solution of the white oxide of arsenic, in doses of five drops three times a day in a little camphorated tincture

of opium. At the same time he prescribed a vinous tincture of cinchona, and the oxide of iron; but the latter was soon laid aside, as unnecessary, and the arsenic alone depended on.

Under the use of this remedy, which was continued regularly three times a day (with the exception of the time that the hooping cough prevailed) from the 10th of June 1818 to the 1st of November 1819, the patient gradually improved, and ultimately got well. She has ever since enjoyed good health.

35. *Calomel in Croup.*—After censuring in the most bitter terms the English and American physicians for employing calomel in inflammatory diseases, our Gallic brethren are beginning to discover that the practice, so far from being irrational and dangerous, may be resorted to advantageously in many cases of croup and pellicular anginæ. M. Bretonneau, of Tours, in his excellent work on Diphtherites, and M. Guersent, in the article Croup of the New Dictionary of Medicine, have been among the first in France to proclaim the benefit derived from calomel in this class of disease, and to offer judicious remarks on the method of using it. In a late number of the *Archives Générales de Médecine*, M. Billard, of Angers, already advantageously known by his treatise on the mucous membrane, has published several cases of the diseases already mentioned, in which calomel was used with more or less advantage. Our object in mentioning this circumstance, is not to give our readers something *new*, for calomel is a favourite remedy in croup, &c. among our physicians: we have simply wished to show the change taking place in the minds of the French practitioners in respect to the effects of that medicine, and to point out M. Billard's views relative to its modus operandi. After opposing the opinion of its acting merely by combating and arresting the specific inflammation on which some think croup depends, he says, "For my part, as I consider that all there is of specific in this inflammation is the rapidity with which the false membrane is formed; and as I find the elements of this false membrane in the very products of the secretions of the inflamed membrane, I cannot admit that calomel exerts a specific action. It appears to me to act by augmenting the mucous secretion of the bronchiæ, and by rendering thinner the product of this secretion. By this means the expulsion of this false membrane is facilitated, and the accidents resulting from the presence of this foreign body in the aerian passages are combated. If administered alone, this remedy would doubtless be insufficient to suspend the march and progress of this terrible inflammation: if combined with evacuations of blood, it becomes a useful auxiliary. It remains to state that M. Guersent, though particularly M. Bretonneau, prescribe calomel in larger doses than most of their countrymen, and fear less the *mercurial* effects of this remedy when used in this way than when given in divided quantities. M. Billard does not think it safe to give more than eighteen or twenty grains in the twenty-four hours. Our readers will readily perceive that the French physicians have not yet learnt to be as *bold* in the calomel practice as the English and ourselves. They regard the mucous pellicles evacuated by stool in such complaints as portions of the membrane detached from the tissue affected by the operation of calomel, and which have been swallowed and have passed through the intestines.

36. *Rhus Glabrum as a Remedy for Ptyalism.*—Dr William M. Fahnestock, of this city, has published in the November number of the American Journal of the Medical Sciences, some remarks on the use of the rhus glabrum (common sumach, or smooth Pennsylvania S.) as a remedy for ptyalism. He says that "an infusion of the inner bark of the root of this article is a very mild mucilaginous refrigerant, and moderately astringent, very cooling and soothing to the irritated surface of the mouth and throat, and can be applied in any stage of the disease, and at any age. (?) It acts by allaying irritation, and obstructing (?) excitement, sheathing the delicate surfaces, and healing abrasions." He used this infusion very extensively, and always with success, in cases "of protracted salivation, sloughed mouths, and ulcerated throats." "Dr Fahnestock thinks that the remedy may be extended with advantage to irritable ulcers of other

parts. Its detergent and very soothing qualities, we believe, would contribute very much to healthy action; but we have no instances to support our opinion."

V. MEDICAL JURISPRUDENCE.

37. *Note on Arsenious Acid in a Medico-Legal point of view. By* M. Orfila.—We derive the contents of this note from the *Journal de Pharmacie et de Toxicologie* for July last. It is generally believed, says M. Orfila, that pulverized arsenious acid diffuses a garlicky odour, when converted into vapour, by being thrown on burning coal, or on a plate of iron or copper heated to a red heat, or in a crucible of an elevated temperature. It is easy to show that the thing is not so, except in cases where this acid has been put on burning coals, which deprive it of its oxygen and disengage the pure metallic arsenic. Let arsenious acid be volatilized in a crucible or on a plate of iron or copper; the vapour thereby produced will have no garlicky odour; which therefore belongs only to the metallic arsenic. This fact, badly described in most of the French works, but familiar for some years to the English and American chemists, was placed in its true light in the year 1821, in the treatise of M. Berzelius *on the use of the blow pipe.*

Another circumstance to which M. Orfila directs the attention of medical jurists, is the ascertaining what happens when a plate of copper, scraped clean of any rust, is put over the vapour disengaged from the arsenious acid projected on burning coals; not that this is of any value as a test of the arsenious acid, but because authors have not presented it in the same light. Some say that the plate is covered with a black coat, while others assert that this coat is white. Experiments show that both of these assertions are correct, and that a black colour is obtained if the copper be applied at a very short distance from the coals, one or two lines for example: whereas the coating is white if the copper be held two or three inches from the fire. It is doubtless in the first case the revivified metallic arsenic which is applied to the copper and *blackens* it, whilst in the second it is the *white* arsenious acid, formed at the expense of the vapour of the metallic arsenic which is disengaged, and the oxygen of the atmosphere.

38. *Toxicological account of Hydrocyanic Acid.*—In the memoir on this subject by M. Orfila, (*Archives Generales, Juillet* 1829,) this learned professor undertakes to point out: 1. The means of detecting this acid pure, anhydrous or hydrated; its presence in syrups and several other coloured or colourless liquids, and the quantity of it contained in each of them. 2. The action of the hydrocyanic syrup of the Codex on the animal economy, and the alterations which it undergoes when left to itself. 3. The lesions of tissue caused by the acid. 4. Finally, the different methods of treatment proposed to combat the fatal accidents which it produces.

1. *Of the means of detecting the hydrocyanic acid.* If the acid be *pure*, anhydrous or hydrated, the most delicate means of detecting it are the *sense of smell* and the *nitrate of silver.* This poison, which has an odour similar to that of bitter almonds, can be smelled in a liquid which holds too small a quantity to be discovered by the most delicate reagents. The nitrate of silver, even when added to a very small portion of the acid, precipitates a white *cyanuret of silver*, a magma, heavy, insoluble in water, or very little so in nitric acid of a common temperature, readily soluble in this acid when boiling, and in ammonia, exhibiting very little tendency to take on a violet hue, decomposable by heat and the contact of air, so as to furnish metallic silver and a portion of the cyanogen, which enters into its composition; the gaseous cyanogen being readily-recognizable, the cyanuret of silver cannot be confounded with any other body. The *deuto-sulphate of copper*, with a little potassa as prepared by M. Laissaigne, is doubtless a more sensible test than the sulphate of iron, but much less so than

the nitrate of silver. It has besides the disadvantage of causing a whitish precipitate, which may be confounded with many others. This is not the case with the *persulphate of iron*, which forms with hydrocyanic acid, to which a little potassa and sulphuric acid has been added, a blue precipitate, (prussian blue.) Still the salt of iron is a less delicate test than the other reagents of which we have just spoken.

If the hydrocyanic acid *be mixed with colourless fluids*, the same reagents as above will be used. But should the nitrate of silver and persulphate of iron furnish brown precipitates, we must dip in the fluid under examination a slip of unsized paper, first having imbued it with a solution of pure potassa: after two or three minutes it will be withdrawn; and when dry we put on all that part impregnated with the hydrocyanate of potass, some drops of the tritosulphate of iron dissolved in a small quantity of water; all the portions thus touched will be of a blue colour slightly tinged with green. We may also try to destroy the colour of the liquor by means of purified animal charcoal, applied cold. This will succeed in certain cases. Finally, if these different means fail, we heat the liquor in a distilling apparatus: the acid and water will be volatilised and afterwards condensed in the recipient, care being taken to keep it at a very low temperature. The distilled liquor will be colourless, and furnish, by means of the different reagents, the precipitates indicated above. It is needless to repeat that during this as well as the preceding trial, we must turn to account the odour peculiar to the hydrocyanic acid.

If we desire to ascertain the *quantity* of hydrocyanic acid contained in a syrup of this name, we are to drop into it an excess of nitrate of silver, after having well diluted it with distilled water: all the hydrocyanic acid will be precipitated in a cyanuret of silver, free from any foreign matter. Numerous experiments made on hydrocyanic syrup, taken from several druggists, show that the syrups of sugar, gum, marsh mallow, &c. with which the hydrocyanic syrup is prepared, are not affected by the nitrate of silver, and that consequently the white precipitate obtained with the nitrate of silver introduced into the hydrocyanic syrup is simply a cyanuret of silver. This very simple process is far preferable to that which consists in distilling the hydrocyanic syrup and causing the vapour to pass into a solution of nitrate of silver. By this latter means there has been in a recent trial a loss (that is a failure in detecting it) of more than a fourth of the cyanuret of silver; whereas, by the one recommended, there would not be the loss of a thousandth part of the cyanuret.

In the supposition that we wish to know the quantity of hydrocyanic acid contained in a liquid in which there are also chlorides, phosphates, carbonates, &c. it is evident that we must ascertain it by the aid of the nitrate of silver. By this last we shall obtain a precipitate composed of the cyanuret and of the chloride, phosphate and carbonate of silver. In treating the precipitate by pure nitric acid diluted with an equal weight of distilled water, only the phosphate and carbonate of silver will be dissolved; and if we boil the residue of the cyanuret and chloride with pure concentrated nitric acid, half an hour's ebullition will suffice to dissolve all the cyanuret of silver, whilst the chloride will not be attacked. The quantity of this last can be determined by weighing it; and as to the proportion of the cyanuret, that is ascertained by pouring on the nitrate of silver formed, enough of hydrocyanic acid to transform all the metal into a cyanuret, which we are to weigh after it is well washed and dried. It is needless to say that we must have recourse to the same process when a hydrocyanic syrup is to be analysed, if we suspect it to contain chlorides, carbonates or phosphates.

An objection may here be made that the cyanuret of silver thus obtained is not the precise measure of the quantity of the free hydrocyanic acid in a liquid; for the salt would be formed equally as soon in the cases in which this latter should contain a cyanuret or a soluble hydrocyanate. How, therefore, are we to determine whether the cyanuret comes from the hydrocyanic acid, rather than from the other compounds? We reply that it will be sufficient to distil a part of the liquid in closed vessels; the hydrocyanic acid will be volatilized, then con-

densed in the recipient if it be free, whereas the cyanurets and hydrocyanates which are fixed (except the hydrocyanate of ammonia) remain in the retort.

2. *Of the action of the hydrocyanic acid of the Codex on the animal economy.* This syrup contains nine parts of saccharine syrup, and one of medicinal hydrocyanic syrup of 0.9 density. It is poisonous in doses of two drachms and a half*, even though diluted with three or four ounces of water, to kill large dogs in the space of fifteen or eighteen minutes. Man cannot resist its action any better, since three drachms and a half were enough to produce death in several adult individuals in the space of twenty to forty minutes. It was therefore wrong to insert the formula of such a syrup in the Codex, since it was natural for physicians to suppose that they could administer this formula in the same dose as that in which the other syrups are commonly given, viz. two and a half, five, seven, nine and a half drachms; whereas, as just remarked, even in doses of two and a half drachms it is speedily fatal.

Left to itself the hydrocyanic syrup of the Codex undergoes the same alteration as the anhydrous acid: it becomes yellow, brown, and ends in black; after which changes it hardly contains any hydrocyanic acid. Hence it may be administered in this state without any inconvenience. These changes vary in rapidity according to the proportions of acid contained in the syrup; a mixture of this nature prepared with a thirtieth part of the acid had not changed its colour at the expiration of ten months, whereas that of the Codex was dark and carbonized at the end of two months and a half.

M. MAGENDIE is not correct in saying, as he has done in his Formulary, that the syrup of which we are speaking is separated into two parts when left to itself, and that the acid accumulates on the surface, forming a layer. It is, therefore, useless to have recourse to the precaution which he indicates, and which consists in shaking the syrup every time it is used.

3. *Lesions of Tissue caused by the hydrocyanic acid.* It had been already remarked by M. ORFILA, (*Toxicologie, 3d edition*) that the hydrocyanic acid had caused inflammation of the mucous membrane of the stomach and intestines in a subject poisoned by the acid. Similar results were obtained in the cases of seven persons poisoned by the same agent; the lining membrane of the stomach and intestines was the seat of phlogosis. The language held by MM. ADELON, MARC, and MARJOLIN, who made the examination in these cases, is as follows: "The seven bodies exhibited, but in different degrees of intensity, a manifest inflammation of the mucous membrane of the stomach and small intestines, with a remarkable development of the mucous crypts of this membrane, and a slight injection of the sub-peritoneal cellular tissue of the viscera already mentioned. The spleen was softened and in many instances reduced to an almost pultaceous mass; the veins of the liver were filled with a large quantity of black and fluid blood; the kidneys were of a deep violet colour, a little softened, gorged with blood, and allowing a ready detachment of their external investing membrane. The heart, of a tolerably firm tissue, was entirely empty of blood, as were the large arteries; the great veins, were, on the contrary, filled with a very dark fluid blood. Throughout the blood was fluid, and in no instance did it show the least tendency to form a coagulum.

"The mucous membrane of the larynx, trachea and bronchiæ, was of a deep red, which was only effaced by washing, and the bronchiæ were to their very termination surrounded by a sanguinolent frothy liquid.

"The membranes of the brain were injected, and the veins of the dura mater gorged with a large quantity of dark and fluid blood: the substance or tissue of the brain was somewhat softer than natural, but in other respects appeared to be healthy, as did the spinal marrow.

"No part exhaled the odour of bitter almonds, nor were there any signs of putrefaction. In all the bodies there was a most marked cadaverous rigidity.

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* The original is two *gros*. The *gros* is equal to seventy-two grains.—ED.

"The mucous membrane of the bladder was white and healthy, as well as that of the pharynx and œsophagus."

In experiments performed on dogs, these organic changes were not observable, probably owing to the suddenness with which death was induced in these animals.

4. *Treatment of those suffering from the ingestion of hydrocyanic acid.* We are at the outset compelled to admit that there is no antidote to this acid; that is to say, there is no substance which, introduced into the stomach, will prevent its poisonous operation. Our efforts must therefore be directed to combating the disease produced by the hydrocyanic acid, and we but deceive ourselves if we rely on any agent as a counterpoison. Thus we have learned that liquid ammonia, essential oil of turpentine, decoction or infusion of coffee, administered at the same time with the acid, are not in any way opposed to the deleterious properties of this poison, in whatever doses they may be given; still farther, they are not calculated to diminish the intensity of the symptoms of poisoning.

The most efficacious means of removing the effects of the poison of the hydrocyanic acid, are the vapours of *ammonia and chlorine, affusions of cold water, and bloodletting.*

Ammoniacal vapours. M. ORFILA cites several experiments made on dogs, in which the otherwise unavoidably fatal effects of the hydrocyanic acid administered to these animals were arrested and removed by their being made to inhale the vapour from the water of ammonia. This last must not be confounded with the strongest liquor of ammonia. The former is made of one part of the latter, diluted with twelve parts of water.

Vapour of chlorine. M. SIMEON, apothecary to the hospital of St Louis, was the first to recommend chlorine for the purpose in question. M. ORFILA employs the vapour rising from one part of chlorine to four parts of water. It is, he thinks, one of the best means of removing the symptoms caused by the hydrocyanic acid, and is even preferable to ammonia and cold water affusions, of which we shall speedily speak. It is of course obviously understood, that much of our success with this or any other means will depend on the promptitude with which advice and assistance are obtained, after the ingestion of the poison.

Affusions of cold water. Of this remedy in cases of poisoning we spoke very fully in our last number, pages 421 to 423, and detailed a number of experiments made by Dr HERBST on the subject*. M. ORFILA confirms the opinions of Dr HERBST, and adduces eight experiments on dogs, on which the affusions of cold water saved the lives of these animals, after they had taken sufficient hydrocyanic acid to kill them if left to themselves.

Bloodletting. Dr HUME has proposed venesection as a sovereign cure for the poisoning from hydrocyanic acid. M. ORFILA admits that it may be useful in such a case, by diminishing cerebral congestion; but he does not regard it as an adequate means of removing the symptoms. At least he has never succeeded in saving, by copious bleeding from the veins of the limbs and necks, those animals which had taken doses of the hydrocyanic acid, about enough to kill them, and which certainly would have been restored by the vapours of ammonia or of chlorine, or even cold affusions.

We may with the author of the paper sum up the method of treatment in cases of poisoning by the hydrocyanic acid. The physician will hasten to administer an emetic or a purgative, if the poison has been introduced by the digestive passages, and if too much time have not been allowed to elapse after the ingestion of the poison. But he must without delay, apply to the nostrils of the sufferer a flask containing chlorine water (four parts of water to one of liquid chlorine), or ammoniacal water (one part of liquor of ammonia to twelve parts of water.) He must insist in an especial manner on the inspiration of those gases, and above

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* The name of Dr HERBST was erroneously printed HERBERT in the article referred to.

all, of the first mentioned; allowing, however, very short intervals for the patient to rest and take breath. At the very commencement, also, recourse must be had to affusions of the coldest water which can be procured. It is to be poured on the head, nape of the neck, and the whole course of the vertebral column: a bladder filled with ice is to be put to the head, where it is to be allowed to remain until the disappearance of the alarming symptoms. The patient should be bled, or leeches be applied behind the ears. Demulcent drinks are indicated. By the aid of these means simultaneously employed, and to which we are to have recourse on the first appearance of the symptoms, we are tolerably sure of obtaining the greatest success, unless the dose of the poison swallowed has been so great as to prove fatal to the integrity of the nervous system, before it is possible for us to try our curative measures.

39. *Poisoning by the Acetate of Morphia.*—This case is related by M. Orfila as follows (*Archiv. Gen.* 1829): A young physician took, on the 2d of May 1829, at half past three o'clock in the morning, *twenty-four grains of the acetate of morphia*, dissolved in about an ounce and a half of water. Ten minutes afterwards, an acute pain was felt at the back part of the head and in the epigastric region: the latter was accompanied with a creeping or kind of pruritus, extending as far as the knee, restricted to the left side of the linea alba and the left thigh. At the expiration of half an hour, the same symptoms were discovered on the other side, and subsequently the upper limbs were affected in the same way. The legs and arms felt as if bruised: the heat of the head, until now confined to the back part, is extended all over it. The sufferer remained in this state *without the loss of consciousness* for four hours and a half, that is, until eight o'clock in the morning; the pruritus, which had gradually increased, was then very distinctly marked; from six o'clock the thirst was intense and the mouth very dry. There was neither nausea nor vomiting. The eyes were the seat of a troublesome pricking sensation, and the transparent cornea seemed covered as if with a thick film; the breathing was free, the heat of the body general and mild, except the extremities, which were cold; the stomach began to swell, but was not painful. From eight in the morning until noon the patient was in a torpid state as if asleep—taking no notice of what was passing around him. This state had been preceded by very frequent and violent pulsations of the carotid arteries, which lasted for at least an hour. At noon, when visitors entered the chamber of the sufferer, he awoke, recognized the voice of the person speaking, looked at him without seeing him, replied that he had not slept, and sank again into the same state of torpor as before. From this time until four o'clock he had no consciousness of what had transpired.

At twenty minutes past four M. Orfila arrived. No assistance had as yet been given, although thirteen hours had elapsed since the introduction of the poison.

The patient was at this time reclining on his back, the head raised and thrown a little backwards, and in a state of profound coma, neither seeing, hearing nor feeling any thing. The eyes were closed; the pupils rather dilated than natural; the jaws locked by a violent trismus. The skin throughout was cold as ice; the breathing laboured, frequent and rattling; at each expiration the patient made a plaintive noise: the beatings of the heart were frequent and irregular, being from a hundred and twenty to a hundred and twenty-two in a minute—weak, soft and easily compressed. The abdomen was tense and much swelled. The right arm, thigh and leg were agitated from time to time by convulsive movements, sufficiently strong to raise the coverlid.

M. Orfila ordered a bleeding of six cupfuls (palettes) or twenty-four ounces, an emetic clyster (which was returned immediately after its administration), the application of the ointment of Gondret on the thighs (without effect), ice on the head, and vinegar and water introduced into the stomach by means of a catheter. During the operation of venesection the body became warmer and the pulse rose. At six o'clock in the evening the comatose state was still decidedly marked; but the trismus had very notably diminished; the pupils were natural;

the muscles of the abdomen and thorax strongly contracted; those of the extremities were relaxed. The pulse became anew small and barely sensible to the touch, the heat of the skin was almost gone.

At ten o'clock there was a marked amelioration of the symptoms, the patient knew the persons around him and answered, though slowly. He complains of not being able to urinate; the hypogastric region is tense and painful, the thirst urgent, the epigastrium painful, the pulse very frequent and strong. At midnight the difficulty of urinating had increased, the epigastrium was less painful, the lassitude general. On the next day at six o'clock in the morning his intellectual faculties were in their natural state, the urine began to flow easily. On the 5th of May, the second day from that in which the poison was swallowed, convalescence was complete. On the 20th he was perfectly restored, except some weakness of the limbs, and a slight numbness at that part of the head on which he had at first felt the heat.

M. ORFILA did not deem it necessary to have recourse to the gall nut, because after the lapse of thirteen hours, there was no longer any poison in the digestive canal. For the same reason he administered acidulous drinks, which do not suit when the opiated substances are still in the stomach.

VI. SURGERY.

40. *Fungus Hæmatodes of the Tongue removed by Ligature.*—The following interesting case is translated from the Latin of Professor VON GALENZOWSKY of Wilna. We have condensed it from Vol. XII. No. 4 of GRÆFE and WALTHER's Journal (1829). A female, sixteen years old, had from her birth a small protuberance of the shape of a bean and of a bluish colour, upon the right side of her tongue near its root. It gradually increased in size; by her seventh year it appeared of the size of a plum. From this period the tumour remained stationary until about her fourteenth year, when its volume augmented rapidly, and produced a very painful impediment to speaking and eating. Menstruation occurred about this period; and the growth of the tumour appeared again to be arrested; and the patient experienced very great relief in consequence of the discharge from the tumour of about a pound and a half of blood, occasioned by a small wound with the teeth. In 1828 the disease increased so rapidly as to threaten suffocation during the night. The patient was now brought to Wilna for medical advice. The swelling was situated eight lines from the point of the tongue, and extended to its root, being but three lines from the palatine arch. On the right side, it extended beyond the edge of the tongue, but on the left, reached only to its centre. It was flattened anteriorly, but posteriorly was so thick, that by its pressure against the roof of the mouth it had lost its previously rounded form, and was thrown into numerous folds. Its edge to the left and anteriorly was irregular, and appeared to lose itself in the sound substance of the tongue. Its colour was throughout bluish; its feel soft and somewhat elastic; there was no pulsation. Chewing and swallowing were now unimpeded; the speech was clear and intelligible, but as of one whose mouth was full. The case was considered to be one of fungus hæmatodes. On the 30th of May a strong ligature was passed through the middle of the tumour with the view of drawing out and fixing the tongue in order to the removal of the tumour by the knife. From the puncture thus made the hæmorrhage was so extensive that the idea of an operation by incision was abandoned, and a double silk ligature was passed, by means of a curved needle, through a sound portion of the tongue and near the basis of the tumour, from left to right; leaving the largest portion of the disease anterior to the ligature; the needle being cut off and the ligatures separated, one was tied around the posterior limits of the tumour and the second around the anterior; care being taken to include, if possible, within them every portion of diseased structure. When the ligatures were tied the tongue became curved towards the right. From the superior ligature some blood continued to

be discharged. The colour of the tumour became darker, and a dragging pain was experienced extending to the throat, under jaw and right temple. After some minutes the tumour being again examined, it was found that in the neighbourhood of the palatine arch, a small portion of the disease had not been included in the ligature. Another ligature was therefore applied. The ends of all the ligatures were then brought out at the right corner of the mouth and fastened to the cheek by adhesive plaster—speech and every motion of the tongue being strictly prohibited. Ice was placed in the mouth and a cold poultice applied to the right cheek, and the strictest quiet enjoined. Some hours after the operation the pain abated; the tumour assumed a size considerably larger than a hen's egg, and, contrary to expectation, blood poured out from the upper puncture. A constrictor was applied to the second ligature, which was tightened until the hæmorrhage ceased. The tumour became destitute of feeling, gradually contracted in size, and soon began to loosen. The ligatures were at first tightened every second, and then every day. Thirst was diminished by ice held in the mouth, so long as swallowing was impossible, afterwards by acidulated drinks. On the second day after the operation the right side of the face and the tongue became much swollen, suspending completely the powers of speech and deglutition: a number of leeches were applied to the cheek and the cold poultice continued. Rinsing the mouth repeatedly with water diminished greatly the pain under which the patient laboured. On the eighth day after the operation the tumour fell off in a half putrid state. It was found to contain in its centre an oval body of the size of a laurel berry, elastic, smooth, white and shining. On cutting it through it was found to be composed of concentric lamina of a substance resembling horn, containing a drop of a clear fluid. The tongue had now assumed its proper direction. The ulcer arising from the separation of the tumour was washed with the chloride of lime, and cicatrized in three weeks. So long as the ulcer remained unhealed the patient could not distinctly articulate the letters h, l, t, g, or r. A slight portion of the disease being found still to remain on the left side of the tongue, it was removed by the actual cautery in June. The female soon after returned home entirely cured. The cicatrix was contracted to a point, and formed a depression in the tongue: the latter could be scarcely protruded out of the mouth, and always directed itself towards the right side, while the arch of the palate was very much distended and advanced unusually forwards.

41. *Osteosteatoma of the Fore-arm unconnected with the Bone.*—From the Latin communication of Professor Von Galenzowsky referred to in the last article, we derive, through Græfe and Walther's Journal, the following case. A man twenty-five years of age, of a robust constitution and sanguine temperament, general health good since childhood, had from a very early period of his life perceived on the inner surface of his left fore-arm, not far from the wrist, a small hard protuberance, entirely free from pain; lately, however, it had increased so much in size, and became so painful, that he was induced on the 13th of January 1828 to apply for medical aid. On the inner surface of the fore-arm, at the lower part, there existed a round, somewhat flattened tumour, of the size of a goose egg. It had the consistency of bone, and presented an uneven surface. It was perfectly movable, and gave no pain even when roughly handled. There, however, frequently occurred a deep seated severe pain in the tumour. The latter was totally unconnected with the bone, being separated by the intervention of the flexor muscles, which lay upon the radius. The extirpation of the tumour was decided upon and performed. Upon inspection after its removal, it was found to be enveloped by a membrane similar to the periosteum. Internally it was composed of bony cells filled with a fatty matter. On the 13th of February the patient was discharged well.

42. *Ovarian Dropsy cured by an Operation.*—From the source indicated above, we derive the following interesting case. A. R. in her 27th year, after exposure to cold, was attacked with fever and strangury, which disappeared in a

week without medical treatment, leaving behind it an unusual degree of debility. Soon afterwards the patient perceived a tumour on the right side of the abdomen, about the size of a hen's egg, and without pain. In the course of two years it had increased to such an extent that she had the appearance of a woman in the seventh month of pregnancy. In March 1827 she applied for aid at the clinico-chirurgical institute of the university of Wilna. The tumour filled now nearly the whole cavity of the abdomen, being most prominent at the hypogastric region. It was tense, elastic, movable from side to side, entirely without pain, and gave no indications of fluctuation. The patient complained of a feeling of weight, numbness of the right arm, costiveness, and a diminished discharge of urine. All the other functions of the system unimpaired. It being evident that the patient laboured under ovarian dropsy, it was decided to extract the diseased ovarium. March 30th. The patient being laid upon a table and properly secured, an incision, five inches long, was made through the linea alba, commencing from above the umbilicus. The peritoneum being divided by this incision, a portion of intestine and omentum protruded, and the tumour presented itself, being the right ovarium greatly enlarged. Its surface was white, hard and irregular: here and there covered by a cartilagino-tendinous coat, varying in thickness. It was found that the tumour extended over to the left iliac region, adhering in its whole extent firmly to the posterior parietes of the abdomen, and containing evidently a fluid. Its total extirpation was found to be impracticable. A large incision was therefore made into its cavity, according to the plan of Le Dran; very little fluid escaped, and on passing the finger into the sac, it was found to be composed of innumerable cells, which being destroyed, about three pints of a thick yellowish matter like honey were evacuated. A ligature was now passed through one side of the sac, and brought out at the external wound with the view of preventing its separation from the latter, and the escape of its contents into the abdomen. The intestines being carefully replaced, the wound was washed, and closed by sutures and adhesive plaster. A pledget of lint, wet with oil, was introduced into the lower angle of the incision, extending into the cavity of the sac; over the whole a light dressing was applied, and the patient placed in bed. To diminish inflammation a bladder filled with ice was applied upon the abdomen; the bowels were evacuated by spoonful doses of oil. During the day occasional vomiting occurred, which was suspended by the saline draught. In the evening the abdomen was tense and tender to the touch, with increased heat of surface, small and frequent pulse. Eight ounces of blood were taken from the foot. Second day: night sleepless, abdomen tumid, no evacuation from the bowels; four grains of calomel were directed, and an emollient glyster. Third day: bowels still costive. The wound being dressed, about three half pints of thin pus were evacuated; patient laid upon her side to favour the discharge. Eighteen leeches were directed to the abdomen, and eight grains of calomel every two hours until they operate. Fourth day: bowels still costive. Calomel continued; pain less; great discharge from the wound. Fifth day: an evacuation from the bowels has afforded great relief. A cough being present, a decoction of flaxseed with syrup of poppies was directed. Eighth day: patient in a very favourable condition; wound has begun to unite. The sutures removed. Ninth day: a yellow fetid matter mixed with flocula, was discharged. Fourteenth day: similar discharge. Thirty-second day: a portion of the sac was discharged. Thirty-fifth day: abdomen tumid and very tense. An effusion supposed to have taken place within the peritoneal cavity. A decoction of dulcamara was directed. Forty-seventh day: the dulcamara having produced an increased discharge of urine, the tumefaction of the abdomen is almost entirely reduced. Medicine discontinued, and the patient placed upon a nourishing diet. Fifty-second and sixty-second days: on each a portion of the sac was discharged. Sixty-sixth day: opening so much reduced that the most fluid discharge can scarcely escape, a sponge tent introduced in order to dilate it. Seventieth day: patient discharged cured. She was still advised, however, to keep the opening free, so long as any matter continued to be discharged, by means of a portion of lint.

43. *Quarterly Report of the Edinburgh Surgical Hospital.*—In the October number of the Ed. Med. and Surg. Journal, Mr SYME, lecturer on surgery, has given his first quarterly report from the surgical hospital established by himself. The hospital was opened on the 8th of May, and during the three succeeding months, three hundred and eighty patients have applied for relief, and seventy have been received as in-patients. Thirty operations were performed. Mr SYME gives a summary of his practice, of which we will present some of the most interesting points:—

Fractures. Thirteen cases were treated. One case of fractured *clavicle* "was cured without any deformity whatever in a fortnight, by means of the simple bandage, which is founded on the principle of keeping back the shoulders, and elevating the elbow of the injured side with a sling, without placing any foreign substance in the axilla." In two cases of fractured *olecranon*, there was no displacement of the upper fragment. Mr SYME says he once met with much difficulty in treating this fracture from a morbid accumulation of synovia. He evacuated the fluid by a small puncture, and then speedily obtained a cure.

Excision of the elbow joint was performed in two cases; one patient was aged twenty-five years, the other nine years, and both had caries of the joint. Both recovered from the effects of the operation; the former was suffering from a chronic bronchitis, but left the hospital better in this respect than when she entered it, and with the prospect of retaining a useful arm. Five weeks had elapsed after the operation on the boy, and he was regaining "command of the joint, which is nearly as movable as ever. I expect a most complete recovery in this case, which will be the more remarkable as a very large proportion of the ulna was removed."

Amputation through the tarsus. This operation was performed on Ann Stewart, aged ten years, on account of caries of the foot, particularly of the middle cuneiform bone. A good flap was made and the disarticulation effected between the astragalus and os naviculare, and the os calcis and cuboides. The wound healed by the first intention; in less than a fortnight the patient could put her foot to the ground, and it was then observed that the flexors had formed new attachments, so that the gastrocnemii and other extending muscles could be counteracted. In six weeks after the operation she walked so well "that I really could not from her gait fix on the defective foot."

Excision of the upper jaw. In the October number of this Journal, we have given the details of this severe operation. Three months have since elapsed without any appearance of the return of the disease, which may perhaps be explained by the separation of a very large slough about a week after the operation. The man is perfectly well, with the exception of a small gap in the cheek, and feels particularly comfortable in being freed from the distracting and incessant pain which formerly tormented him.

Axillary tumour. Margaret Mathieson, aged twenty-three years, was affected with a very large and hard tumour in the axilla, which completely filled this cavity, preventing the arm from being approximated to the side, and was occasionally the seat of severe lancinating pain. It had existed more than half a year, and was increasing progressively. Other tumours were observed in the neck and throat. As amenorrhœa also existed, Mr SYME prescribed internally the *cantharides*, as not only useful as an emmenagogue, but as having a remarkable effect in promoting the action of the absorbent vessels. Soon after commencing this course, the patient noticed a remarkable diminution, not only of the pain, but also of the swelling, and regularly improved to the 10th of July, [she was admitted on the 10th of June], when, being comparatively speaking well, she returned home, in great joy at her recovery.

44. *Neuroma: Tumour of a Nerve.* Most surgeons still have dreadful anticipations from wounds and contusions of nerves. Such accidents are always productive of severe pain, and this may sometimes prove injurious: but from numerous authenticated facts, we feel convinced that injuries of nerves do not excite febrile or nervous symptoms more readily than those of other tissues of

equal irritability. Amputation and the numerous operations of surgery, involving the cerebro-spinal nerves, are daily performed without any bad consequences, and even those cases where local irritation of a nerve is kept up for months or years, seldom manifest any peculiar symptoms excepting those local ones dependant on the particular trunk concerned, such as severe pain, spasm of muscles, &c. towards its minute ramifications. In the October number of the Edinburgh Medical and Surgical Journal, Dr H. L. GIBBS records the case of a sailor, aged forty-two years, admitted into the St Petersburgh naval hospital, on the 24th of December 1828, with a tumour on the outside of the arm, four inches above the elbow and below the deltoid muscle. Fifteen years previously he had received a blow with a handspike at this spot; the pain was severe, attended with numbness, and remained for several months. In six months a small tumour was observed, painful on being touched, and accompanied by lancinating pain in the course of the radial nerve. For twelve years and a half, it remained stationary and free from pain. For two years the peculiar painful feelings returned; and on admission, the tumour was the size of a hen's egg, painful on pressure and very slightly compressible. After bleeding and a cathartic, the tumour was extirpated on the 3d of January 1829; it was found connected with the spiral nerve; and having separated the tumour from its lateral attachments, the nerve was divided three quarters of an inch *below* it [the first section of the nerve should have been above the tumour for an obvious reason]. The man instantly sustained the loss of sensation and motion in the outer part of the forearm and back of the hand. The nerve was then divided above the tumour; this was attended with pain. January 4th. Was restless, suffered from pain under the sternum, and a sense of constriction across the lower part of the chest and præcordia, also from pains, shooting up the neck in the direction of the brachial nerves. The antiphlogistic plan was adopted; the uneasy sensations disappeared; part of the wound healed by the first intention; part suppurated and granulated. On the 29th day, the wound was healed; on the 35th day, he had regained a slight use of the extensor muscles, and the numbness was gradually disappearing; and on the 16th of April, the patient was discharged with returning sensation in the back of the hand and a tolerably free use of the arm. The tumour was found to consist of a thickened neurilema, of the colour and appearance of the tunica albuginea of the testis, and of a disorganized nervous matter in which fibres were observable.

45. *Ligature beyond an Aneurismal Tumour.*—This subject continues to attract much attention, and cases are multiplying. In our last number, page 425, we noticed Mr WARDROP's late publication; and have now to record a case in which the celebrated DUPUYTREN has performed this operation for an aneurism at the commencement of the right subclavian artery, and extending under the clavicle. We condense from the Medico-Chirurgical Review for October. The patient was a labourer, forty years of age, and of good constitution. He was admitted into the Hotel Dieu, on the 28th of May 1829. Five months previously he suffered much from pain about the shoulder and arm, which was soon attended with a swelling above the clavicle. This increased; and on admission, was as large as the fist, extending from the trachea to near the scapulo-humeral articulation. The pulsations corresponded with those of the heart and were extensive and powerful. The operation was performed in the theatre of the Hotel Dieu, on the 12th of June, before a great number of spectators. The incisions made parallel to and below the clavicle, exposed the axillary vein, which was greatly swollen, and was separated from the artery only by a cautious and slow dissection. A silk ligature was passed under the artery. To ascertain that all was right, M. DUPUYTREN took hold of the ligature at either end, and by lifting it up, and pressing at the same time the artery on it with his finger, was able to arrest or permit at pleasure the circulation through the vessel. The absence of pain showing that no nerve was included, the ligature was tied at once. At the instant this was done, M. SANSON, who had his finger placed upon the tumour, perceived that about twenty irregular and precipitate pulsations occurred

all at once, after which they resumed their former ratio. During the operation, fourteen vessels were secured. The wound was lightly dressed, and compresses wet with a very weak solution of the acetate of lead were employed, together with a bag of pounded ice over all.

The patient suffered afterwards from dyspnœa and general uneasiness; was bled, and took anodynes, with demulcents. The tumour was notably diminished in size, but pulsated as strongly and superficially as ever. On the 17th, a painful cough disturbed the tumour, the pulse was strong and quick, and the dressings became stained with scarlet blood. The source of the blood could not be discovered. The wound was washed with cold water and the bleeding ceased. The patient was bled twice on the 17th, again on the 18th and 19th. The pulsations of the tumour continued, and the bottom of the wound appeared tumid, as if the tumour was extending. No perceptible alteration on the morning of the 20th, except that the debility was considerable, as it had been since the 17th. Towards evening he complained of general uneasiness, swooning fits succeeded, and he died in the course of the night without presenting any other remarkable symptom.

On dissection, the first and second ribs, upon which the tumour rested, were found ulcerated, and in one point, completely destroyed. There were six or eight ounces of a dark sero-sanguineous effusion in each of the pleural cavities. The heart was pale, flabby, and dilated in its cavities with rather attenuated walls. There was some lymphatic effusion on the posterior part of the pleura of the right lung and some induration of the lung from recent inflammation. The aorta, from its origin to three fingers breadth above the diaphragm was so enormously dilated as to admit the fist of a child ten years of age, into its cavity. Its coats were very thick, and the inner was of a livid red colour, and presented a number of "fungosities" and erosions, through which protruded spiculæ of osseous matter. The innominata was double its natural size, but otherwise sound. The aneurismal tumour was exclusively confined to the subclavian, the whole of which it occupied. No rupture could be found to explain the hemorrhage. The axillary artery was not divided by the ligature, and the vein and vessels had been fairly avoided. In the Archives Generales for August, it is stated that few traces of the tumour were discoverable, that the extremities of the fragments of the first rib (divided by ulceration) penetrated the interior of the sac, and were there covered by a fibrous clot. The sac contained also a quantity of coagula, some of which were deposited in successive laminæ.

This case appears to have excited much interest in England as well as France, and the fatal result has been attributed to different causes. As the patient died on the eighth day after the operation, and from the time of its performance laboured under symptoms evidently excited by this surgical measure, we must regard it as the exciting cause of his death. But would the patient have perished if his organism had been perfect? We see nothing in this case to prove that the operation would have been fatal, if the heart, aorta and innominata had been free from disease; but when these structures were so much disorganized, it would be indeed astonishing that the patient should survive so serious an impediment to the circulation thus caused by a ligature on the axillary artery, combined with aneurism of the subclavian. A more important question is whether this method of operating for subclavian aneurism can ever be successful? So many large vessels are given off by the subclavian artery, that there is reason to fear, that no adequate coagulation of blood can occur in the tumour even if the axillary artery be obliterated. Facts can alone decide this question, and the present case will, in the opinion of some, bear on the negative side of the question, as the pulsations of the tumour were not diminished. It should be remembered, however, that the size of the tumour was lessened, and that the operations performed by Mr Wardrop and Mr Evans, for aneurism of the innominata, would seem to prove that the vessels passing off from the subclavian, between the ligature and tumour, are not always sufficient to prevent a cure, and encourage still further attempts to save patients by the ligature beyond the tumour, in those cases where the usual operation is impracticable, and where nothing is to be expected

from the treatment of VALSALVA. DUPUYTREN himself considers the patient's death as caused by the thoracic disease, and not as the result of the operation: hence he would not abandon the only method promising relief under such circumstances, and in an analogous case would resort to the same operation. In aneurisms of the lower portion of the carotid, the success has been very encouraging.

46. *Extirpation of the Uterus.*—We have already alluded in former numbers of our Journal (Vol. II. p. 207, Vol. VI. p. 420) to the fact that the uterus had been successfully extirpated. Most of these operations have however been performed by means of a ligature in cases where a prolapsus of the organ existed. From the Archives Generales for September, we learn however that this dangerous operation has been lately successfully performed by M. RECAMIER of the Hotel Dieu, the uterus not having descended into the vagina. Much skill and science were exerted by the surgeon, and as this operation may be justifiable in cases of cancer uteri, which have hitherto been abandoned to their fate, especially where the patient solicits assistance, we will detail some of the particulars of this interesting case.

The patient was fifty years of age, of a good constitution, not subject to leucorrhœa or any chronic disease. In December 1828, she first observed a mucous flux per vaginam, which continued to return at menstrual periods, becoming yellowish, greenish, and finally bloody and fetid. General health suffered exceedingly, and she was admitted on the 24th of July 1829. On examination per vaginam the neck of the uterus was found greatly ulcerated, the os uteri dilated and softened, and the uterine cavity filled with encephaloid tumours. There were no preternatural adhesions to the rectum or bladder; the abdomen was soft and indolent; pulse and tongue good; and patient confident, and desirous of relief. The patient was placed as for lithotomy. Two hooks (pinces de museux), having their handles bent to a right angle, were fixed on the projecting portion of the neck of the uterus, and delivered to an assistant, who, by a slow, strong and continued force, drew down the uterus as much as possible. This was the most painful part of the operation. M. RECAMIER, after examining the rectum and finding that it had not followed the uterus in its displacement, proceeded to divide the vagina. The left index finger served as a conductor to a guarded bistoury, sharp only at its extremity, by which the mucous membrane of the vagina was divided anteriorly at the place where it is reflected upon the neck of the uterus. By means of the finger alone, the cellular tissue between the neck and bas fond of the bladder, was divided for the extent of two inches. The peritoneum was next divided by the bistoury as the mucous membrane had been; and by means of the finger, the broad ligaments were found tense, in consequence of the forced descent of the uterus. A probe pointed bistoury was conducted to the spot where the membranous folds are inserted at the angle of the uterus, by which they were cut for two thirds of their height. The patient did not lose an ounce of blood, and complained but little of pain. The left index finger, bent at an acute angle, embraced the remainder of the broad ligament, while with the right hand the operator passed a ligature, by means of a long needle mounted on a handle, over this portion of the broad ligament. The end was seized and brought out; where it was confided to an assistant, who prepared a noose by which he compressed the parts enclosed. The same was effected on the other side, and thus all dread of hemorrhage was removed.

The body of the uterus was now carried forward and drawn outwards. The hooks were removed, and the surgeon divided the posterior part of the vagina, and the remaining portions of the peritoneum, chiefly by means of the bistoury. An assistant, by means of a finger in the rectum, informed M. RECAMIER of the progress made by his incisions. The whole was thus cut out, and when the membranous fold including the uterine arteries was divided, no hemorrhage followed, as the ligatures had been properly applied. When the uterus was removed, a portion of the omentum appeared between the nymphæ, but was immediately restored.

The vulva being washed with cold water, and a fine sponge placed at the en-

trance of the vagina, the patient was conveyed to bed in a fainting condition and bathed in sweat. By appropriate measures, some reaction occurred in the evening. The abdomen was covered with a cataplasm and an anodyne administered. A sero-sanguineous fluid was discharged per vaginam. Next day pulse and heat returned so much that she was bled to ℥vj. The catheter was employed. On the 28th symptoms of peritoneal inflammation commenced; M. RECAMIER had her bled, and explored the vagina; he found the commencement of adhesions, and destroyed those which might prevent the transit of fluids externally. The vaginal discharge continued. On the 29th, again bled and leeched. On the 30th, ligatures loose; a cessation of vaginal flux: leeches, warm bath, &c. 31st, leeches twice repeated; warm bath used with much advantage. The evacuations per vaginam are fetid. August 1st. Patient better. 2d. Ligatures came away last night; cicatrization commenced. 3d. Not so well: fetid vaginal discharge, diarrhœa, involuntary flow of urine, tympanitis, &c. The next day better, and afterwards continued to improve under the employment of baths and injections of pure water into the vagina. The vaginal discharge gradually changed from a sero-albuminous character to that of true pus. On the 10th, the patient sat up for half an hour; and by the 8th of September, had gained flesh and strength; the yellowish colour of her skin was disappearing, and she was able to descend the stairs to the garden, and afterwards to remount five stories, without assistance. She sleeps well, eats with an appetite, and her digestion and stools are regular. The urine often flows involuntarily during the night. The superior part of the vagina is circularly contracted and gathered in folds like a purse: the opening, which will receive the finger's end, conducts to an excavation formed by the approach of the bladder and rectum. This cul-de-sac daily contracts, and scarcely furnishes a few drops of healthy pus. It is situated about three inches from the vulva. There is no induration or other indication of disease in the vagina; and hence it may be inferred that the patient has been saved from the inevitably fatal effects of a cancer of the uterus by this operation.

That extirpation of the uterus may succeed, it is necessary, according to M. RECAMIER, 1. That the bladder and rectum be sound. 2. That the uterus be movable. 3. That the broad ligaments do not contain tumours. The uterus must always be drawn down, as otherwise the ligaments could not be made sufficiently tense for division. There is no danger of hemorrhage with a skilful operator, if the ligatures be passed as above detailed. The mesentery is too short to allow of the sudden escape of the small intestines, and there is little danger of the entrance of air as the vagina does not remain open. The occurrence of peritonitis is not to be dreaded as much as had been imagined, especially when arising from a wound, and when, as in the present case, there is a free and dependent orifice for the evacuation of fluids.

VII. MIDWIFERY.

47. *Tumour in Vagina after abortion, mistaken for the Placenta.*—From the Archives Generales for August, we learn that M. DENEUX reported to the Academy the case of a female, aged thirty, the mother of two children who aborted in May last, of a fœtus, aged four months. The placenta not coming away immediately, the surgeon, Dr SORBIER, left his patient. On his return, he was informed, that the placenta was removed, and on examination found no remains of it or the cord, but remarked that the uterus was more developed than usual at this period of gestation. Bad symptoms, as thirst, pain, restlessness, frequent pulse followed; milk was not secreted, and the lochiæ were fetid. On the 15th day, a soft fleshy body appeared at the vulva; other physicians were consulted, who condemned the practice pursued, and affirmed that this body was the placenta. M. DENEUX was called on, and at first was of a similar opinion; but on examination, ascertained it was a fibrous tumour from the uterus. This was removed by means of a ligature round its pedicle, and of the scissors. The

patient, who was in a most alarming state before the operation, died in two hours after it was completed. On examination, the remains of the tumour were discovered; the uterus was of the size of two fists, and extensive peritoneal inflammation existed. The tumour, of the size of the fist, was composed: 1. Of an exterior portion, soft, gangrenous, and having a fetid smell. And 2. Of a central portion, white, fibrous, lamellated, firm, and creaking when divided by a bistoury.

48. *Cephalotripsy* (*Céphalotripsie*).—Under this name, M. BAUDELOCQUE (nephew) has described to the Academy of Medicine at its session in July, as we learn from the Revue Medicale for August, a new operation for breaking down and extracting the child's head in labours otherwise impracticable. He has given it this title from the two Greek words κεφαλη the head, and τριπσις a breaking down. M. BAUDELOCQUE details the inconveniences and dangers of the crotchet, as witnessed by himself and as supported on authority, and then describes the instrument which he has devised, and named "cephalo-tribe," from the Greek, τριζων a breaker. It is a strong forceps, whose blades when not opened are sixteen lines in length and three lines in thickness; as much curved as forceps for seizing the head above the superior strait, articulated much in the same manner as Smellie's forceps, and the handles of which are thick and large, roughened that they might not slip in the hands of the operator; are perforated at their extremity to receive a screw with three threads, the circles of which are very oblique, for more rapid rotation. To this screw is attached a handle, six inches in length, to increase the power of the instrument. He observes that by the cephalo-tribe, (thus imperfectly described), the head of the fœtus can be compressed with so much force, that the bones of the base as well as the vault of the cranium can be broken and flattened in an instant, that the cerebral matter escapes through the orbits, or by the nose or mouth, and that almost always the hairy scalp resists the action of the instrument: this at least is the result of certain experiments made on the heads of infants who have died some days or weeks after their birth.

M. BAUDELOCQUE proposes this instrument as a substitute for the various perforators of the cranium, as well as the crotchet, and believes, that by its means the most voluminous head can be broken down above the superior strait where the antero-posterior diameter measures twenty-four, or even twenty lines in length. He details a case of laborious labour, happily terminated by the aid of this instrument, on the 9th of February last, in the course of a few minutes, where the superior strait measured only two inches and three quarters in its diameters. As soon as the forceps were applied and the screw tightened, the patient testified her astonishment at the relief afforded; the volume of the head being reduced to the size of a very small nut (an inch in diameter), extraction was immediately made and the delivery was easily accomplished. Experienced surgeons present examined the perineum and testified that it was not torn. Hence the cephalo-tribe, notwithstanding its enormous weight, namely six pounds without including that of the screw (de la vis de rappel), which is one pound and a quarter, can be easily managed without any injury to the female. The fœtus weighed six pounds; putrefaction had commenced; the head had been seized in its long diameter from the occiput to the chin. The female completely recovered.

VIII. MATERIA MEDICA AND PHARMACY.

49. *Sarsaparilla.*—In the Transactions of the Medico-Botanical Society of London, we find some valuable observations relative to sarsaparilla, contained in a communication made to the society by JOHN HANCOCK, M.D. whose residence in the native country of the plant, has afforded him advantages in the study of its genuine character, which are possessed by few other physicians. We shall give an abstract of the most important facts. The sarsaparilla of commerce is

derived from all the species of smilax, of which Dr HANCOCK found not less than six or eight growing in the woods of Guiana: yet only one of these manifests to the taste any of the sensible qualities of the genuine medicinal sarsaparilla; the rest being nearly insipid, and wholly inert. Hence the great difference of opinion as to the efficacy of the medicine. The best sarsaparilla is brought from the interior, and according to Dr HANCOCK is derived from a species of smilax not hitherto described; the stems of which are sometimes mixed with the roots, and present characters which do not correspond with those of the S. syphilitica of WILLDENOW. The only good criterion of the activity of the medicine is, in his opinion, a peculiar nauseous acrimony when it is chewed. The virtues of the root do not reside exclusively in its bark, as some suppose, but pervade equally all its substance, the woody and farinaceous, as well as the cortical part. Dr HANCOCK says that this has been proved in Demarara by the results of their separate administration in disease, and will easily be believed upon a trial of their sensible effects on the mouth and fauces. He is inclined to believe that the *medicinal powers of sarsaparilla depend on a certain acrid or nauseous matter*, which is in some measure covered and concealed by the mucilaginous properties of the root. He states with confidence, derived from "sufficient experience," that the *powers of sarsaparilla are quite destroyed by long boiling*, another fact which helps to explain the contradictory statements relative to the advantages to be derived from its use. The peculiar odour which arises in the commencement of the boiling, is extinguished after the process has been continued for a long time; the characteristic taste is destroyed, and the doctor has given the medicine, prepared in this way, to patients, without any effect, who have afterwards recovered under the use of sarsaparilla, from the same parcels, prepared in a different manner. He directs that it should be well bruised in mortars, and then infused in water, which is to be kept for some hours near the boiling point. Dr HANCOCK is by no means the first physician who has denied the propriety of the usual mode of preparing sarsaparilla by long boiling; but his testimony is of great importance in corroborating this opinion, coming as it does from a man who has enjoyed the best opportunities of forming a correct judgment.

The Spaniards of the Orinoko use an infusion of sarsaparilla prepared by fermentation, and Dr HANCOCK speaks favourably of its effects. He gives the following recipe for the Spanish *jarave*, or diet drink, which has been found very effectual in Guiana. "Take of Rio Negro sarsaparilla, bruised, 2 lb.; bark of guaiacum, powdered, 8 oz.; raspings of guaiac wood, aniseed, and liquorice root, each 4 oz.; mezereon, 2 oz.; treacle, 2 lb.; and a dozen bruised cloves: pour upon these ingredients about four gallons of boiling water, and shake the vessel thrice a day. When fermentation has well begun, it is fit for use, and may be taken in the dose of a small tumblerful twice or thrice a day." To increase the alterative effect of this preparation, and to enable it to resist decomposition, the doctor recommends the addition of twelve grains of tartarized antimony, eight or ten grains of corrosive sublimate, and one drachm of muriate of ammonia. These are to be dissolved in a little water, and added after the commencement of fermentation: if previously added, they might prevent the process from taking place. Dr HANCOCK thinks it probable that the alcohol generated during the fermentation serves more effectually to extract the active matters of the sarsaparilla; one of the medicinal principles of which is, he believes, insusceptible of being completely dissolved by boiling water.

They who desire to see the paper of Dr HANCOCK at length, will find it in the Journal of the Philadelphia College of Pharmacy, a periodical which we take this occasion to recommend to our readers as a highly valuable addition to their libraries, both from the importance of the original matter, and from the ample view which it presents of the progress of pharmaceutical science.

50. *Virginia Snake-root.*—From a valuable paper by Mr DANIEL B. SMITH, published in the Journal of the Philadelphia College of Pharmacy, we condense the following interesting facts relative to the Virginia snake-root. This medicine is the product of at least three species of aristolochia; the *A. Serpentaria*, the

A. Tomentosa, (*Hirsuta* of Muhlenberg); and the *A. Hastata*, (*Sagittata* of Muhlenberg). The roots of these plants are very similar in sensible properties, and probably also in medical effect: and the only certain method of distinguishing them, is by a comparison of the leaves and stalks, which generally accompany the roots in the parcels brought into the market. But a fact of greater importance to the practitioner is, that substances of an entirely different character from the serpentaria are occasionally mixed with it. Among these are the roots of the *Panax Quinquefolium*, which grows abundantly in the same neighbourhoods with the Aristolochia Serpentaria beyond the Alleghany mountains. In a parcel brought from Tennessee, Mr SMITH discovered a large admixture of the roots and stalks of the Spigelia Marilandica. It is important that physicians and apothecaries should be aware of this fact, as the root of the spigelia has so close a resemblance to that of the Serpentaria that it would be difficult, if not impossible, by the eye alone, to distinguish them. Their taste, however, is entirely distinct; the former being sweetish, sub-acrid and nauseous; the latter, warm, bitter and aromatic. When the stems and leaves are mixed with the roots, the adulteration may be readily detected by the eye.

51. *Ergot of Maize.*—In the *Revue Medicale* for August, we find the following facts, communicated by Dr ROULLIN, in a memoir read at the Royal Academy of Sciences, on the 20th of July last. During his residence in South America, this gentleman had opportunities of observing the ergot growing upon maize, or, as we more commonlyicall it, Indian corn. The appearances it presented were in some respects similar to the spurred rye; but in others there was a sensible difference. This ergot is always found in the form of a little tubercle, from one to two lines in thickness, and from three to four in length. It is not, as in the rye, an elongated grain, but consists of a small cone engrafted upon a sphere, and resembles a pear in shape. It is of a livid colour, and without any peculiar smell. Sometimes many neighbouring plantations are attacked with the ergot at the same time, but the disease rarely extends through a whole province. One of its most common effects is a loss of the hair in those who eat the diseased grain: and this effect is remarkable in a country where baldness from other causes is almost unknown, even among the old. It sometimes also produces a looseness of the teeth, and even occasions them to fall out; but it never gives rise to gangrene, nor to convulsive disorders. Swine have at first some repugnance to the ergoted maize; but in the end, seek it with avidity. After they have been eating it for some days, their hair begins to fall, without any other perceivable alteration in their health: a little later, however, some difficulty in the movement of their hind legs is observable; their limbs become emaciated, and the animal can scarcely support itself upon them. As soon as this state of things is perceived the animal is killed, and no unpleasant consequence results to those who eat the flesh. Mules also eat the grain freely, and with similar effects: but by removal to a distant pasturage they recover their health.

Hens which live upon it frequently lay their eggs without any shell: a result very reasonably attributed by M. ROULLIN to the contractions excited by the ergot in the organs destined for the expulsion of the eggs, before it has had time to cover itself with its calcareous envelope: in other words, abortion is produced.

In the fields of corn attacked by the ergot, it is not uncommon to see monkeys and parrots fall as if drunk, and without the power to rise again. The native dogs, and the deer which enter the fields during the night to eat the maize, sometimes experience the same fate.

It is stated, upon the authority of persons said to be worthy of credit, that the diseased grain, or as it is called by the natives, the *mais piladero*, is deprived of all its deleterious properties, when carried beyond the *Paramos*, high mountains, where it is always cold.

This disorder of the maize does not appear to prevail over any very great extent of country. It is unknown in Peru and Mexico, and in the central republics. Dr ROULLIN has never heard of its existence beyond the limits of Neyba and Mariquita in Columbia, and only in the warm parts of these provinces.

52. *Active Medicinal Principle recently discovered in the Root of the Chiococca Racemosa.*—In a note addressed to the Royal Academy of Sciences of Paris, MM. FRANCOIS and CAVENTOU announce the discovery of a medicinal principle in the root of a shrub, the *chiococca racemosa* of Linnæus, known commonly by the name of *cainca*, and growing in the forests of Brazil, on the banks of the River of Diamonds. In the province of Bahia the plant is called *raiz preta*, or black root; and is used as a diuretic and purgative. The principle alluded to differs from all known substances. It is white, and crystallizable in small silky needles, which arrange themselves in groups, like the crystals of the muriate of morphia. It is inodorous, of a very strong aromatic bitter taste, soluble in alcohol and ether, and very slightly soluble in water. It burns like vegetable substances, and without residue; is neither alkaline nor perfectly neutral, but approaches nearer to the character of an acid, as it is readily dissolved by alkaline solutions.

It is eminently tonic without producing irritation, and may be used for a long time without inconvenience to the patient. It is moderately cathartic, and powerfully diuretic, operating especially on the kidneys, the secretion of which it modifies in a manner peculiar to itself, producing after the first dose, a very great increase of urine. The diuresis once established, is gradually augmented, and is continued without fatigue to the kidneys or bladder. Its diuretic property is never more evident than when the urine is scanty, burning, and high coloured. After the first dose, the secretion becomes more copious, the discharge ceases to be attended with pain, and the colour is diminished. From the tonic, diuretic and purgative properties of this active principle, it promises to become in the hands of physicians a powerful weapon for combating disease.—*Revue Medicale et Journal General de Médicine for September.*

53. *Male Jalap.*—M. LEDANOIS, a French apothecary, travelling in Mexico, describes, in a letter which was read before the French Academy, a new kind of jalap, called *male jalap*, extensively produced in that country, and possessed of strong purgative properties. The plant which furnishes it is hairy, and has pale leaves: that from which the ordinary jalap is derived is smooth, of a beautiful green, and has a climbing stem. The root of the male jalap is fibrous, fusiform, and sometimes twenty inches in length; while that of the common jalap is tuberculous. It seems to be a question not entirely settled, whether the two plants are specifically distinct, or as a learned botanist supposes, mere varieties of the same species, differing only in consequence of the difference of the situations in which they grow. In chemical composition the male jalap is analogous to that in common use. One thousand parts of it, according to M. LEDANOIS, contain eighty of resin, two hundred and fifty-six of gummy extract, thirty-two of starch, twenty-four of vegetable albumen, and five hundred and eighty of lignin. Small quantities of the muriates and carbonates of lime, potassa and magnesia, with some traces of iron, are discovered in the ashes of the root. As a purgative the medicine is said to be be active and certain. *Revue Medicale, Tom. III. p.* 522.

54. *Myrrh the Product of the Balsamodendron Myrrha.*—In a memoir read before the French Royal Academy of Medicine, (section of pharmacy) on the 11th of April, M. BONASTRE stated his belief, that he had discovered in commerce some pure and genuine myrrh, similar to that analysed by BRANDES, which had been brought from the east by certain Prussian naturalists. They had collected it from a shrub, the *balsamodendron myrrha*, which is believed to be the same with the *amyris kalaf* or *kafal*, described in the Flora Ægyptio-Arabica of the traveller Forkahl.—*Nouvelle Bibliotheque, Juin* 1829.

55. *Test of Myrrh.*—At a subsequent meeting of the Academy in May, the same gentleman announced that the tincture of genuine myrrh is rendered of a dark red colour, like the lees of wine, by the addition of nitric acid, while the spurious kinds, as well as bdellium, and all other gum resins at present known, pre-

sent only a yellowish colour under similar circumstances. According to M. BONASTRE, one hundred parts of genuine myrrh contain fifty parts of gum, thirty-eight parts of resin, three parts of volatile oil, four parts of bitter extract, and five parts of an undetermined acid, with some salts of potassa and of lime.—*Nouvelle Bibliotheque, Aout* 1829.

56. *Chloride of Zinc, employed internally and externally.*—Professor HANKE, of Breslau, strongly recommends the chloride of zinc as a caustic, having employed it in his own practice for many years with great success. He thinks it much preferable to the corrosive sublimate, nitrate of silver, red oxide of mercury, or arsenic. The cases in which it may be used most advantageously are those of old syphilitic ulcers which have assumed a carcinomatous character, phagedenic ulcers of the face, *nævi materni*, fungous ulcers, fungus hæmatodes, &c. He sprinkles the powdered chloride more or less thickly, according to circumstances, upon the surface to be cauterized, then covers it with adhesive plaster, and secures the whole with compresses and a suitable bandage. The action of the caustic is completed in six or eight hours; and the eschar falls off about the sixth or eighth day, and sometimes sooner. The resulting ulcer is healthy, and speedily heals. Sometimes it is necessary to repeat the operation; but no unpleasant accident has ever occurred.

The chloride of zinc may also be used in solution, or in the form of an ointment. In the latter state, the professor has employed it advantageously in place of the tartar emetic ointment. It produces a granular eruption, with a redness similar to that of scarlatina, not a pustular eruption, such as follows the use of the preparation of antimony.

Internally it has been found useful in epilepsy, chorea, and neuralgic affections of the face. The author recommends a solution of one grain of the chloride in two drachms of muriatic ether, of which five drops may be taken in a little sweetened water every four hours, to be gradually increased as the patient may bear it. Much caution is necessary in its internal use, as, when too liberally administered, it is apt to produce pain and heat in the stomach, nausea, vomiting, anxiety, difficult respiration, with a frequent and feeble pulse, cold sweats, faintness, and other alarming effects.—*Archives Generales, from* RUST's *Magazine, Vol. XXII. No.* 2.

57. *Alkaline Principles in the Bark of the Willow.*—On the 22d of June, M. MAGENDIE announced to the Academy of Sciences of Paris, that M. LEROUX, an apothecary at Vitri-le-Francais, had discovered two vegetable alkalies in the bark of the willow, which appear very analogous in all their properties to quinia and cinchonia. The charge of examining these alkalies was committed to GAY LUSSAC and THENARD.—*Journal General de Medecine, Juillet* 1829.

58. *Chlorine, Iodine, and Bromine, Antidotes to the Vegetable Alkalies.*—Some very interesting results in relation to the action of chlorine, iodine and bromine upon the vegetable alkalies, have been obtained by M. DOUNE, and communicated to the Royal Academy of Sciences, among the proceedings of which they are published in the *Révue Médicale* for September. M. DOUNE has found, that by the addition of tincture of iodine, tincture of bromine, and alcohol, impregnated with chlorine, separately, to the vegetable alkalies, compounds are produced, upon the precise nature of which he cannot yet pronounce decidedly, but which appear to him to be iodides, bromides and chlorides. The alkalies do not seem to be changed in the combination; for they may be separated by an acid with which they unite to form salts, having all their usual properties, while the iodine, bromine and chlorine are liberated. But the fact which more especially concerns the medical practitioner is, that these compounds, however powerful their bases may have been, exert, even in large doses, no action upon the animal economy. Thus the iodides, bromides and chlorides of strychnia and brucia were administered to dogs, in the dose of two grains and a half, without any dangerous effects; while half a grain of strychnia is sufficient to produce te-

tanic paroxysms, and even death; and the sulphate and muriate of this base are still more active, in consequence of their solubility.

An obvious inference from these facts is, that iodine, and the analogous substances before mentioned, may be employed as antidotes to the powerful vegetable alkalies, when they have been taken in quantities sufficient to endanger life; and the correctness of the inference appears to be established by the result of actual experiment. After having ascertained that strychnia, in combination with iodine, bromine, or chlorine, produced no dangerous symptoms when given in the dose of two grains to a healthy dog, M. DOUNE tried the effect of the uncombined alkali, followed very speedily by doses of the substances which he conjectured might act as antidotes. We select the most interesting of his experiments.

A grain of strychnia was given to a dog, and immediately followed by the tincture of iodine. No apparent effect was produced.

After an equal quantity of strychnia, the tincture of chlorine was given, with the same result.

The tincture of bromine was not found equally efficacious: for, though swallowed immediately after a grain of strychnia had been administered, it did not prevent the animal from dying with tetanic convulsions: yet, in a previous experiment, the bromide of strychnia had proved harmless.

Two grains of brucia, followed immediately by the tincture of iodine, were innoxious; and the same quantity of veratica, similarly treated, produced no other effect than a great deal of foaming at the mouth, which is always observed in animals that have taken alcohol.

M. DOUNE found that it was necessary to exhibit the antidote very speedily after the poison, in order to obtain its favourable operation. A dog which took two grains of strychnia, and eight or ten minutes afterwards some tincture of iodine, died with convulsions at the end of half an hour.

Such is an outline of the facts communicated by M. DOUNE. It is unfortunate that only the uncombined alkalies are thus capable of being affected by the tincture of iodine or chlorine; for we are more in the habit of prescribing the salts than their bases in a separate state, and cannot, therefore, avail ourselves of the antidote where it is most likely to be required. But, though the mineral acids decompose the chlorides, iodides, and bromides; is it not possible that the affinity of some of the vegetable acids is less strong, and that the saline combinations in which the alkalies are found in nature might be decomposed and rendered harmless by the bodies which prove so advantageous in neutralizing the alkalies themselves? Should it be found that morphia may be separated from the meconic acid by means of iodine, and form with this substance an inert compound, we should have in our possession an antidote as much more valuable than all other antidotes, as opium is more frequently taken in fatal doses than any other poison.

59. *Galls an Antidote to the Vegetable Alkalies.*—The proceedings of the French Academy are rich in valuable information. To the facts already related, we have to add the following, derived from this source. M. GUIBOURT, by the administration of powdered galls, milk, and manna, cured a dog which had been poisoned by the nux vomica, and was severely affected with tetanic convulsions: and M. VIREY stated that the same substances had just been recommended by ORFILA in cases of poisoning by opium and the salts of morphia.—*Nouvelle Bibliotheque, Aout* 1829.

60. *Epispastic Ointment from Mezereon.*—M. GUIBOURT, on whose authority we gave the formula for this ointment in our last number, has satisfied himself that it is too weak; and, therefore, proposes, in the October number of the Journal de Chimie Médicale, that the quantity of the alcoholic extract of mezereon should be increased to two drachms to the nine ounces of lard, and one ounce of wax.

IX. CHEMISTRY.

61. *New Mode of Preparing Sheet Caoutchouc.*—We condense the following article from a communication by Mr E. DURAND, inserted in the Journal of the Philadelphia College of Pharmacy for January 1830. Dr J. K. MITCHELL, Lecturer on Chemistry in the Philadelphia Medical Institute, has discovered a mode of making sheet-caoutchouc, which possesses very remarkable properties. It is prepared by soaking the caoutchouc in ether until soft, and in that state cutting it into plates or sheets with a wet knife, or stretching it to any desired degree of thinness. If bags of this substance are employed, they may be expanded by means of the breath to a great size. One now exhibiting in Peale's Museum measures more than six feet in circumference, and yet weighs only seven ounces.

Sheet-caoutchouc, prepared by this process, is very soft and pleasant to the touch, possesses great extensibility, and may be made so thin as to appear nearly colourless and transparent, yet retaining considerable strength and tenacity. When two pieces are laid together and cut with scissors, the cut edges adhere with considerable force, and, indeed, after some hours' maceration, unite as strongly as the rest of the sheet. In this way, tubes, bags, socks, caps, &c. both water and air tight, may be formed.

The properties of this preparation are very similar to those of sheet-caoutchouc, as made by Mr HANCOCK of London. This gentleman conceals his process; but, on the contrary, Dr MITCHELL wishes his mode of treating this substance to be generally known, and hence he authorized Mr DURAND to make the publication in the Journal of Pharmacy, from which this article is taken.

Dr MITCHELL has also discovered a good solvent for caoutchouc. It is the essential oil of sassafras, acting on the article after it has been softened by ether. A solution of it in this oil, applied to glass or porcelain, will form upon drying a thin pellicle of pure caoutchouc, which can, by wetting it with water, be separated in the form of a sheet. Applied to the surfaces of torn or cut caoutchouc, it causes their firm and inseparable adhesion.

[We have had the pleasure of examining the caoutchouc as prepared by Dr MITCHELL, and feel satisfied that the preparation will be useful on many occasions in the arts, and in the practice of medicine and surgery. One large balloon which we inspected, formed from a small bag, was between two and three feet in diameter, and so exceedingly light as to ascend readily when filled with hydrogen. The soaking in the ether to produce the requisite softness requires eight or ten hours.]

62. *New Element, Bromine.*—Messrs ROBIQUET and BOYVEAU announce, in the *Journal de Chimie Médicale* for July last, that they have received on sale from M. LŒVIG, of Creuznach, this new substance, and are prepared to dispose of it as well as the bromide of potassium at twelve francs per ounce. M. BALARD, the distinguished discoverer of this substance, offers it at the same price. His agent is M. QUESNEVILLE of Paris. This information will prove interesting to American chemists who may wish to possess specimens of bromine.

63. *Discovery of a New Earth, by* BERZELIUS.—It will be seen by the following extract from a letter from M. BERZELIUS to M. DULONG, contained in the Annales de Chimie for August last, that the celebrated Swedish chemist has discovered a new earth.

"I have just discovered a new earth, which possesses nearly all the properties of the substance formerly known by the name of thorina, and which proved to be a phosphate of yttria. By reason of its close analogy to that substance, I have retained the name of thorina for the new earth.

"Thorina is white, and irreducible by charcoal and potassium. After having been strongly ignited, it is not attacked by any of the acids, except concentrated sulphuric acid, even though it be previously treated with caustic alkalies.

"The sulphate of thorina is very soluble in cold water, but nearly insoluble in boiling water; hence it may be freed from admixture with other salts by washing with boiling water. Thorina dissolves very readily in carbonate of ammonia. On heating the solution, a portion of the earth is precipitated; but the precipitate is redissolved as the solution cools. All the salts of thorina have a pure astringent taste, very similar to that of tannin. The chloride of thorinum, treated with potassium, is decomposed with a triple deflagration. The product is a gray metallic powder, which is incapable of decomposing water, but which, heated to above redness, burns with a splendour nearly equal to that of the combustion of phosphorus in oxygen. Notwithstanding, thorinum is but slightly acted on by nitric or sulphuric acid. Muriatic acid, on the contrary, dissolves it with brisk effervescence. Thorina contains 11.8 per cent. of oxygen. Its specific gravity is 9.4. It exists in a new mineral, found in very small quantity, at Brévig in Norway."

The high specific gravity of this earth, and the solubility of its sulphate in cold water, and sparing insolubility in hot, are very characteristic properties. If thorina be considered as a protoxide, the atomic weight of thorinum will be nearly 60.

64. *Iodide and Chloride of Nitrogen.*—M. SERULLAS read two additional memoirs on these compounds, and on the action of sulphuretted hydrogen on the two chlorides of phosphorus, before the Royal French Academy on the 6th of July last. His results, which we derive from the *Journal de Chimie Médicale*, are as follows:

1. The iodide of nitrogen decomposes water, giving rise to the iodate of ammonia.

2. Ammonia becomes formed, in most cases, upon the decomposition of the iodide of nitrogen; a fact which led M. SERULLAS at first to suppose that this fulminating iodide contained ammonia.

3. The chloride of nitrogen, submitted to the action of different substances, such as sulphuretted hydrogen, phosphorus associated with the sulphuret of carbon, sulphur, arsenious acid, likewise furnished ammonia on decomposition, and always in these cases without detonation.

4. The fulminating silver of BERTHOLLET presented the same results; that is, furnished ammonia, which probably was formed during its decomposition; as might be inferred from the fact that nitrogen is sometimes disengaged from it under circumstances which preclude the supposition of the decomposition of ammonia. Hence M. SERULLAS infers that fulminating silver is in reality a compound of nitrogen and silver.

5. Upon introducing the perchloride of phosphorus into a jar filled with dry sulphuretted hydrogen, muriatic acid is immediately disengaged with effervescence, and there is formed a transparent and colourless liquid, which M. SERULLAS regards as a definite compound of chlorine, phosphorus, and sulphur.

It appears from the above summary of the more recent experiments of M. SERULLAS, that he retracts the statement, which we published in our last number on his authority, that the chloride and iodide of nitrogen contain hydrogen.

65. *On Kinic Acid and its Combinations, by* MM. HENRY, JUN. *and* A. PLISSON.—We have condensed the following article from the *Annales de Chimie et de Physique* for July 1829. The kinic acid presents the appearance of tartaric acid, possessing in some degree its taste. Its crystals are inodorous, and perfectly transparent and colourless, sp. gr. 1.637. When heated, it is decomposed, and converted into the pyro-kinic acid. It is soluble in alcohol and water, dissolving in two and a half times its weight of the latter liquid, at the temperature of 48° Fahrenheit. By the action of water and heat it is converted into starch and sugar. Treated with nitric acid in small quantities, and exposed to heat, it sublimes in the form of an acid, resembling the pyro-kinic; with a larger quantity of this acid it is transformed into oxalic acid. Sulphuric acid first communicates to it a beautiful green tint, and afterwards carbonizes it.

Its ultimate constituents are,

2 atoms of carbon	12
2 atoms of hydrogen	2
3 atoms of oxygen	24
	38

Kinates. The experimenters attempted in vain to form well crystallized acid salts. The only subsalt they could form was the sub-kinate of lead.

Kinate of lime. This salt may be formed by crystallizing the sulphuric acid decoctions of bark, first rendered colourless by hydrate of lead. It has a bitter taste, and is very soluble in water, and insoluble in alcohol.

The *kinate of soda* crystallizes in six sided prisms, which are permanent in the air. It appears to be anhydrous.

The *kinate of baryta* is formed by double decomposition between kinate of lime and muriate of baryta. It crystallizes in acute octohedrons, which become opake in the air.

The *kinate of ammonia* becomes acid by evaporation, and in that state cannot be crystallized regularly.

Kinate of lead. This salt crystallizes with difficulty in long needles. The experimenters paid particular attention to its preparation, in order to ascertain whether it presented the singular phenomenon of the carbonides.

The *kinate of silver* is prepared by direct combination. It is soluble in water, but insoluble in alcohol. It becomes decomposed very rapidly by the action of the least light, and by a gentle heat.

The essential febrifuge salts of cinchona. It having been shown by former researches, that the organic alkalies of cinchona are in the state of kinates in this bark, the experimenters conceived it to be of importance for the interests of the healing art, that the kinates of quinia and cinchonia should be artificially prepared. They succeeded easily in obtaining them, either by direct combination, or by the way of double decomposition.

Kinate of quinia. This salt is very soluble in water, but less so in rectified alcohol. It has a bitter taste, which resembles very exactly that of the yellow bark. It crystallizes in crusts of a mammillated form, and opake or semi-transparent. After having been crystallized repeatedly, it greens the syrup of violets. In order to have the salt white, it is necessary to make use of constituents extremely pure.

Kinate of cinchonia. This salt is more soluble than the corresponding one of quinia. Its bitterness is combined with more astringency than belongs to this latter salt. It crystallizes with difficulty, assuming a mass of silky and pearly needles.

As the kinates of quinia and cinchonia pre-exist in the cinchonas, it occurred to MM. Henry and Plisson, that the physician should employ these natural salts, as being more likely to produce therapeutical effects in harmony with the properties recognized in the bark of this precious vegetable. They, however, are not disposed to pursue their conjectures, but are content to leave it to medical men to determine, whether the kinate of quinia is to be preferred to the sulphate, and whether, in cases in which the latter is found to fail, the former would present any advantages.

Miscellaneous Articles.

MEDICAL POLITICS.

In looking over the pages of the New York Medical and Physical Journal for October last, our attention was arrested by an article entitled *Secret Medical Association*. It consists of a few lines introductory by the Editor, and a very copious extract from what purports to be the report of a "Trial of a Suit brought into the District Court, for the City and County of Philadelphia, by GEORGE M'CLELLAN, M.D. against FRANCIS G. BEATTIE, M.D. for a Libel." We marvel greatly at the ready credence which the editor of that journal has thought fit to give to the indecent and unjustifiable attacks against the Kappa Lambda Society of this city, and the notoriously false statements of the motives for the feelings and conduct of some of its members, as contained in the extract. A regard for the common courtesies of life, to say nothing of the higher principles of justice and honour, ought, one would suppose, to have restrained him from becoming, as he has virtually become, the sponsor for the aspersions cast on estimable, and we may add esteemed individuals, by an anonymous scribbler, to whose pamphlet there is not, as we are informed, even the name of a printer affixed. The drift of this self styled impartial reporter is to exonerate Dr M'CLELLAN from censure, to use a mild phrase, by impeaching the motives and conduct of every person whose testimony during this and a former trial was at all adverse to his moral and professional character. Why this so called *impartial* account is so sedulously withheld from the Philadelphia public, that very few persons within the circle of our acquaintance have been able to procure a sight of it, and yet so industriously directed, as it would seem, to other remoter quarters, and persons who cannot become acquainted with the real state of things, is of itself sufficient evidence of the badness of the cause which it advocates, and the unsoundness of the logic and perversions of facts by which it pretends to set forth this cause. Bat-like, its reporter shuns the broad light of day; his appeal must necessarily be then to the sympathies of those whose vision is like his own. If he find such with whom he can commune in darkness, we shall esteem ourselves happy in having them pointed out to us, that we may avoid becoming the objects of their vampyre propensities. But we must confess that we have been greatly surprised and chagrined on his account, to find a professional man, in the responsible station in which the New York Editor stands, giving, on such authority as this pamphleteer, a ready ear to slander against a society, with the general purposes of which he either was or might have been readily acquainted; and of the character of whose members he was bound, before taking such a step as he has done, to inform himself.

When, in reference to the Kappa Lambda Society of this city, he utters "the expression of a sincere hope that the medical atmosphere of New York is untainted by the exhalations of any *branch* from such a parent stem," he speaks with unjustifiable if not affected ignorance of the real state of things. Does he mean to claim for New York an uncommon purity of medical atmosphere, and its remarkable exemption from the storms of party, the polluted blasts of detraction, or any taint of selfish passion; and then contrast such a pleasant state of things there with that prevailing here. He well knows the history of medical politics in his own city—let him learn from us something of that which influences us in ours.

We have not here two great medical parties disturbing the social comfort of the city and agitating the state. A very large majority of physicians in Philadelphia are intent on fostering the most amicable relations with each other: each willing to aid his professional brother in all his *fair and honourable* views; and even when he cannot approve, content, for the sake of peace and charity, to be silent. If we could efface the scandalous chronicles in which the hero of the impartial Reporter has been such a conspicuous actor, we should be at a loss to find any thing of moment during the last eight or ten years which has disturbed the general tranquillity of the profession in this city. We will not assert that this peaceful state of things has been solely the work of the Kappa Lambda Society: but we are very sure that it has contributed to this end. Now, agreeably to this view of the matter, we really do not see any reason why the New York Editor should deprecate a branch in his city from such a "parent stem" here. We are taught the policy of taking a lesson even from an enemy. Where would be the harm in New York borrowing wholesome ethics and a well regulated medical code from her rival? Can the Editor of the Medical and Physical be really ignorant of the fruits of our tree? Is he now for the first time to be told of the code of ethics by which the Kappa Lambda Society is governed; and which it caused to be printed, with the name of the *author* from whom it was taken on the title page, and that of the *printer* at the end of the pamphlet? Was it for him to be ignorant of the annunciation of the purposes of the Society, distinctly given years ago (January 1827) in an introduction to one of our volumes? How could he, after this annunciation, and with the title page of the North American Medical and Surgical Journal staring him in the face, and a knowledge of the heading of many papers in it "read before the Kappa Lambda Society," still allow to pass without comment or reprehension the assertion of the Reporter, that the manner in which the members "pass their time at the meetings of the Association, or how their common funds or united efforts are applied, has not been made known?" Would he, in any other case than the present one, tolerate the singular impudence which should adduce, as a proof of partiality and unfair criticism or sinister dealing in a journal, the circumstance of five "respectable men as individual editors" consenting to have their names published with it, and to act as agents of a Society which held the right of property in the work? As if the very fact of their allowing their names to be put forward, was not of itself a strong and sufficient guarantee of the purity of purpose and independent bearing of their colleagues of the Society. There is no review in Great Britain or in this country which furnishes as strong a pledge of independence to its readers, as was done in the measure thus causelessly aspersed by the reporter. The journal emanating from the Society is in his opinion wanting in impartiality—because it is not favourable to the pretensions of his friend. But let us ask, what journal is, or can be, favourable to a person who requires for his justification a sacrifice of the character of all professional rivals, however venerable for their years, or estimable for their skill and upright conduct, or whatever may be the particular society or social interests to which they belong. Bad indeed must be that cause in which even a favourable verdict is deemed inadequate to heal the many wounds of reputation, without the additional aid of an anonymous "Report" and of studied misrepresentations.

MEDICAL STATISTICS.

Average Mortality in different Countries of Europe.—The annual deaths, on an average, throughout the whole of England and Wales, are nearly one for every sixty inhabitants. In the Pays de Vaud the average mortality is 1 in 49. Sweden and Holland present the same standard, or nearly 1 in 48. Next on the list is Russia, where the mortality is 1 in 41. In France 1 dies annually out of every 40—a proportion precisely similar to that of London. It is calculated that in France, about one half of those born live to 20 years, while a third live to 45 years. The lowest annual mortality is at the age of 10, when it is only one in 130. At the age of 40 it is 1 in 53. The probable duration of

life in France, at the age of 50, is 23 years. The mortality increases among the poor, and diminishes among the affluent. In the wealthy departments of France, life is protracted 12 years beyond its course in those which are poor. According to Dr Hawkins, a recent writer on medical statistics, the conservative tendency of easy circumstances is strongly evinced in England. In proof of the same, is the very inferior degree of mortality and disease which occurs among persons insured at the various life-offices. It was found in 1810, that the deaths, which had occurred among 63,000 persons, insured during 30 years, were only 1 in every 81 1-2, being in the proportion of only 2 to 3 of what had been anticipated from the ordinary tables of the probabilities of life. Among these *selected* lives, the mortality of the women was still less than that of the men; females in the middle classes enjoying a remarkable exemption from fatigue and harass. Of 1000 members of the University Club, only 35 died in three years, or about 1 in 90 annually. It is stated, that of 10,000 pupils, who passed in different years through Pestalozzi's institution, in Switzerland, not one died during his residence there. They were chiefly youths, but of all countries, constitutions, and ages; generally, it is to be observed, in easy circumstances. Pestalozzi, also, paid particular attention to their bodily exercises. On the scale of comparative mortality, Austria follows France; the annual mortality being in the proportion of 1 in 38. In Prussia and Naples it ranges from 1 in 33 to 35. The average mortality of the principal cities of the south of Europe is as follows:—Leghorn, 1 in 35: Madrid, 1 in 29: Rome, 1 in 25: Palermo, 1 in 31.

At Geneva, in Switzerland, correct tables of death have been preserved since 1560, and the results are in the highest degree curious and satisfactory. It appears that, at the time of the reformation, half the children born did not reach 4 years of age: in the 17th century, the probability of life was about eleven and a half years: in the 18th century it increased to above twenty-seven years. We arrive hence at the remarkable conclusion, that, in the space of about three hundred years, the probability of prolonged life to a citizen of Geneva at his birth, has become five times greater. The *mean life* was thus: in one century, eighteen years: in the next it grew to twenty-three: in the middle of the next, it rose to thirty-two; and finally, during the present century, from 1815 to 1826, it amounts to thirty-six years.—*Journal of Health, No.* 7.

PHILADELPHIA MEDICAL INSTITUTE.

The course of lectures for the summer term in the Medical Institute will begin on the first Monday in April, and be continued, as heretofore, until the 1st of November. The month of August is a vacation. Ample accommodations are now furnished in the new building in Locust street, erected during the last summer.

N. CHAPMAN, M.D.—On the Practice of Medicine.
WILLIAM E. HORNER, M.D.—On Anatomy.
WILLIAM P. DEWEES, M.D.—On Midwifery.
SAMUEL JACKSON, M.D.—On Materia Medica.
JOHN BELL, M.D.—On the Institutes of Medicine and Medical Jurisprudence.
J. K. MITCHELL, M.D.—On Chemistry.
H. L. HODGE, M.D.—On the Principles of Surgery.
THOMAS HARRIS, M.D.—On Operative Surgery.

ASSOCIATION FOR MEDICAL INSTRUCTION.

The following physicians have associated themselves for the purpose of delivering a course of Medical Instruction to their private pupils, and to others engaged in the study of medicine.

JOSEPH PARRISH, M.D.—Practice of Medicine.
FRANKLIN BACHE, M.D.—Chemistry.
J. RHEA BARTON, M.D.—Surgery.

GEORGE B. WOOD, M.D.—Materia Medica and the Institutes of Medicine.
SAMUEL MORTON, M.D.—Anatomy.

Lectures will be delivered by these gentlemen upon the branches of medical science respectively attached to their names: and the students will have access to a course of lectures by

CHARLES D. MEIGS, M.D. upon Obstetrics, and the Diseases of Women and Children.

The lectures will commence in the spring, and will be continued, with a short recess in the summer, till the opening of the winter courses in the University of Pennsylvania.

In the winter season, examinations will be given upon the various branches: and the members of the class will have the benefit of Dr Parrish's lectures on the Principles and Practice of Surgery.

Philadelphia, January 1*st*, 1830.

MEDICAL INSTRUCTION.

The high responsibility incurred by medical practitioners, and more especially by those, who, in our extensive country, may locate themselves far from the facilities and advantages which large cities present, renders the education of gentlemen for this profession, a matter of the greatest importance to the community. A growing sense of this has doubtless given rise to the increasing number of students who pass the summer months in this city, in order that their studies may continue uninterrupted throughout the year; in fact, the advantages resulting from a regular attendance upon public institutions, where surgical operations are frequently performed, and all forms of disease to be witnessed, and the opportunities and leisure required for consulting medical works, are only to be obtained in this way.

Entertaining these views, and disposed to facilitate, by every means in their power, the progress of students in medicine, the subscribers propose to give a summer course, to commence on the first Monday in April next, and to continue until the last of October. During the winter session of the University of Pennsylvania, the several courses there delivered will be reviewed by examinations.

Principles of Surgery.—W. GIBSON, M.D.
Operative Surgery.—J. RANDOLPH, M.D.
Midwifery, &c.—C. D. MEIGS, M.D.
Practice of Medicine.—B. H. COATES, M.D.
Institutes of Medicine.—R. LA ROCHE, M.D.
Materia Medica, Medical Jurisprudence and Botany.—R. E. GRIFFITH, M.D.
Anatomy.—J. P. HOPKINSON, M.D.

The Class will have the privilege of attending the Lectures on Chemistry, by Professor BACHE, at the Franklin Institute.

Philadelphia, January 1*st*, 1830.

Mr JOHN GRIGG, No. 9, North Fourth-street, Philadelphia, has in press,

1. Elements of Chemistry, including the recent discoveries and doctrines of the science. By Edward Turner, M.D. Professor in the London University; F.R.S.E. &c. &c. Fourth American from the Second London edition. With important corrections and additions, by Franklin Bache, M.D. Professor of Chemistry in the Franklin Institute.

2. A Treatise on the Theory and Practice of Medicine, in 2 vols, 8vo. By John Eberle, M.D. Professor of the Theory and Practice of Medicine in the Jefferson Medical College, Philadelphia.

Messrs CAREY & LEA, Philadelphia, have in press,

1. Elements of Myology, by John D. Godman, M.D. illustrated by a series of beautiful engravings of the muscles of the human body, on a plan heretofore unknown in this country.

This work, in addition to an ample and accurate description of the general and special anatomy of the muscular system, will comprise illustrations of the subject from comparative anatomy and physiology, with an account of the irregularities, variations and anomalies, observed by the various ancient and modern anatomists, down to the present time.

2. A Review of the Principal Medical Doctrines and Systems of Nosology, with an Exposition of the Principles of Physiological Medicine. By P. F. J. V. Broussais, M.D. &c. &c. Translated from the new edition.

3. History of Phlegmasias, or Chronic Inflammations; founded on new Clinical and Pathologico-Anatomical Observations; presenting a view of the varieties and different combinations of these Diseases, with their modes of treatment. By P. F. J. V. Broussais. Translated from the last edition.

4. M'Culloch on Remittent and Intermittent Diseases.

5. The Minor Operations of Surgery. Translated from the French, by Isaac Hays, M.D. with 42 plates.

6. Introduction to Lamarck's Genera of Conchology.

Just published by them, Dewees's Practice of Physic, 2 vols, 8vo.

Messrs S. WOOD & SONS, and COLLINS & HANNAY, of New-York, and Messrs J. GRIGG and J. G. AUNER, of Philadelphia, have just published,

A Treatise on the Diseases of the Chest and on Mediate Auscultation. By R. T. H. Laennec, M.D. Regius Professor of Medicine in the College of France, &c. Translated from the latest French edition, with Notes, and a sketch of the Author's Life, by John Forbes, M.D. Member of the Royal College of Physicians, &c. With plates. From the third revised London edition, with additional notes.

METEOROLOGICAL JOURNAL FOR THE YEAR 1829, KEPT IN THE CITY OF PHILADELPHIA.

1829.	TEMPERATURE.			DIURN. VARIATIONS.			*Prevailing winds.*	*Rain in inches.*
	Highest	*Lowest*	*Mean*	*Greatest*	*Least*	*Mean*		
January								
February	44	8	25	18	3	7	N.W.	3.75
March	63	24	35	29		11	N. & W.	2.87
April	78	34	51	24	2	9	N. & W.	4.99
May	88	44	64	26	2	16	S. & W.	2.68
June	88	56	70	22	2	14	Easterly	3.44
July	88	56	72	22	3	12	S. & W.	4.35
August	89	60	73	18	4	12	S. & W.	4.61
September	85	44	61	18		10	Westerly	2.1
October	70	32	52	22	1	11	N. & W.	2.30
November	60	24	43	16		7	Southerly	3.47
December	62	25	43	18	2	9	Northerly	1.51